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Disk



TFX wouldn't fit on the floppies so we've crammed four top applications on our two coverdisks. Wow!

Visual Prefs

Visual Prefs allows you to customize your Workbench to a very high degree. After Visual Prefs is installed, its own installer can't even run so that it replaces necessary files to Workbench. It will generally create a new preferences icon in your file drawer called GUI. After Visual Prefs is installed, you may delete the temporary drawer.

Visual Prefs allows changing of the colors used to draw windows and the standard gadgets

Font is selectable also. Set the accompanying spreadsheet for an example on what Visual Prefs is able to do. We haven't the space to document the GUI preferences program in full here, the best bet is to jump in and play with the intuitive settings and read the documentation provided with Visual Prefs. With just a bit of effort your Workbench will look totally revitalized!

It's worth noting that while Visual Prefs is fairly reliable, it is an extender system's patch. Like any system patch, it may conflict with your software or other files, other system patches you have installed. Visual Prefs is known to not work with ProCD and Center Files. If you run into problems at all, you can uninstall Visual Prefs by removing the file VisualPrefs from your startup sequence.



Loading Instructions

This month we've examined four top applications onto our two coverdisks 166 and 167. Each of them is easily installed from coverdisk 166 via Workbench. Coverdisk 166 has all of the installers so there's no need to insert coverdisk 167 until the installers ask you for that disk. Remember, access coverdisk 166 via Workbench, don't try to boot it. When you click on any of the installer icons on coverdisk 166, you'll be given a file requester where you must choose a location on your hard drive (or even RAM) where you want to install the application.

166 Video Easel

Video Easel is a stunning package that allows exploration of a whole range of animated "life" type algorithms known as cellular automata. As such it's a little complex and is aimed at more experienced Amiga users, it will also require around 250k of free memory free.

After Video Easel has been installed, there's a few extra things we may need to do depending how much you plan to use Video Easel. Firstly the directory will contain an archive called ReadMeLibLib. and the resources.lib.lib must be installed to your lib: directory to use the GAMMEX scripts provided before you do this, of course. ReadMeLib must be running here either your Workbench or your own startup sequence. To extract the archive, go to the shell and CD to the directory where you have installed Video Easel. Then you need to type in the following, this is a ReadMeLibLib to resources.lib.lib file.

Naturally you'll need a copy of the Lib archive but who doesn't by now? If you experience graphical problems with drawing lines, read the VideoEasel Demo AmigaGuide documentation or install the PatchDraw patch to fix this problem. We found that this wasn't necessary on our machines. Video Easel is a highly complex package that will certainly benefit from reading the entire documentation archive provided. Here's a brief tour through making Video Easel read its stuff. Start VideoEasel. Select the Open option in the Apps menu. Locate the file called Life in the file requester and press Open. VideoEasel will ask if it's OK to clear the screen.

Answer OK. Select the blue colour for drawing by moving the mouse over the blue rectangle at the lower right bottom of the screen

and pressing the left mouse button. Select Load from the Brush menu. Select the file gliders.lib in the middle of the screen and press the left mouse button once. This will place this obstacle in the screen. Start the automata by pressing the "v" shaped button right in the screen and see what happens. This will start the calculation of new generations of this automata.

It's made more exciting by changing the speed from shortening the delay between generations. The obstacle will begin to blow up and split periodically and split out a glider each several cycles of the automata. The gliders will start moving in the lower right direction. Stop the automata with the same button on the tool bar. Load another brush with the same menu and place it somewhere on the screen. Try experimenting!

Physical laws such as the isotropic growth algorithms can be modeled with cellular automata, even ferromagnetism and the gas laws are other applications. Also the propagation of sound in gas can even be simulated, in addition to the focussing of sound by an optical lens.

See the Experiments section of the provided AmigaGuide or

Video Easel 1



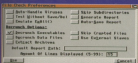
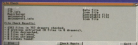
Disk



Virus Z

This latest version 1.09 of VirusZ will keep your drives free from destructive viruses. Even the very recent Babes, Irid Trojan, VMCI and Kender trojan viruses are fully recognised, eliminated and damage repaired. Virus Z can be installed directly where you intend to reside, all that's required then is to click on the Install Usb icon in the newly created VirusZ directory and the new toolbar will be applied to your Workbench. VirusZ is fairly straightforward in operation and comes with great SetupGuide help files to point you in the right direction. When first running VirusZ, it will almost certainly complain about system vectors being patched. Must

often this is because of third party patches you may be running such as MultiICE or BCP. The settings menu contains the options for the various virus checking procedures. The most important is the file checking settings. VirusZ has the ability to detect compressed files to see if there's a virus hiding inside, this panel controls these settings. To check your Workbench partition, simply activate the File check option in the Project menu, select your Workbench with the Navigator, press the All button and then OK. A Window will appear showing progress and you'll be prompted to remove any found viruses, so rest easy with VirusZ.



TB 303 Emulator

If you like techno, the legendary Roland TB 303 Bassline should need no introduction. For the benefit of those who are unfamiliar with this magical alien box, the 303, so it is generally known, was originally thought of as a cheap electronic replacement for a live bass player. It didn't until the mid '80s that people realised you could get some wild sounds from it and made the first acid house tracks. It's been discontinued for many years now, and second hand units fetch up to £1000, which is quite amazing considering the simplicity of the technology.

But you don't have to pay £1000 to get that unique 303 sound, as we've an accurate emulator on this month's disk! It works by a control panel of knobs – like the real thing – and renders samples in sequence which can be saved out as standard MP samples. Preview the settings by pressing the speaker, although this won't include all the effects and adjustments. Use the left and right mouse buttons to turn the knobs (use 1 and 2 especially for tap sounds). See Sound! Lab on page 98 for more, but for now have a play with it... and watch your basslines.

Control guide



1. Sets the tuning for the note
2. Emphasises the specified frequency band
3. The amount of frequency resonance
4. Point at which the filter closes (turn right for no filter changes)
5. Sets length of the 'decay' part of the sound
6. Defines the amount of attack
7. Single or sequence mode
8. Sets the source wave type
9. How much the note will pitch bend up or down
10. Direction of the pitch bend
11. Opens the preferences menu
12. Not yet implemented
13. Load it up in the 'deck'
14. Resonance full level
15. Cut the program
16. Undo last change made
17. Select a new sound
18. Brings up the help guide
19. Switch back to Workbench
20. Load a script to render
21. Set the start of the sequence
22. Set the end of the sequence
23. Add a chorus effect
24. Add a distortion effect
25. Add playing distortion
26. Remove lower frequencies
27. Load parameters from disk
28. Save parameters to disk
29. Test the current sound
30. Save it
31. Render the sound to RAM according to current settings
32. Save the rendered sample
33. Play the rendered sample
34. Set the sample
35. Render a sequence
36. Set length of sequence

CD-ROM

Super CD-ROM 15



Welcome to CUCD15. If you haven't invested in a CD drive yet, read this to see exactly what it is that you're missing.

CUCD15 can be booted from a CD32 or an AT2600-M680 with CD32 emulation. In order to use this CD from your own Workbench, you will need to run it on the hardCD box, which will then allow software to run from the CD. It imitates MMU, I/O and the Newt/Gem systems - don't be surprised if the look of your Workbench suddenly decides to change. The whole thing is only temporary, and it can be removed by simply clicking on hardCD again.

To help you in finding your way around, there is a DOCS GUIDE, which will connect you to nearly all text documents, and INDEX which is a CD search tool. Just like everything else on the CD, you need to click on them to activate them.

650 Mb of What?

It's easy to miss when the real contents of a CUCD file is here's a list of some major data files in such directory. This month our theme is ShapeShifter and games - a bumper collection of over 10MBs of ShapeShifter utilities and support files, and not to mention a whopping great 13MBs of games!

Value for money or what?

- TFX 111MB
- ShapeShifter 63MB

- CDSupport 67MB
- CDRom 7MB
- Demos 70.5MB
- Games 126MB
- Graphics 10MB
- Magazine 1.5MB
- Online 44MB
- Preview 25MB
- Programming 31MB
- Readers 31MB
- Sound 41MB
- Utilities 34MB
- WWW 31MB

This month's CUCD is even more amazing than normal! The full version of the legendary TFX and a 100% full 650Mb of other wonderful goodies, make up CUCD15.

Highlights

TFX

CU Amiga's getting soup de grace, the full version of DreamDisk's unreleased TFX flight simulator. This state of the art game can be found in its entirety on the CD with versions for standard Amigas, those fitted with TPU's and 68040 machines. You'll even find a drawer of files which are ready to copy onto T206 PC floppy disks if you're using this special CD from a PC compatible. Installation to hard drive can be performed with the provided installer script or dragging of the TFX directory. Wow!



On the floppies

This directory carries the contents of the floppy disks from the floppy issue of CU Amiga. This month we've included 4 installing utilities, Video Editor for interesting the algorithm animations, VisualCD32 for a T2063 synthesizer emulator, VisualPrefs to customise your Workbench beyond the norm and VisualC to keep your Amiga safe from viruses.

Index explanation

Reaction to Ider on CUCDs has been a mixed bag of criticism and praise. Much of the problems have been caused by a lack of understanding of what Ider is for and failure to click on the essential hardCD icon. This month we have made some changes to the Ider launcher to work around the existing problems so that this system is more fool proof.

For those that missed it, most projects have on CUCDs now have Ider as the default tool. Ider allows you to choose exactly what viewers and players you wish to use for specific types of files. Graphics card users may display all pictures on current and future CUCDs with a hi-resolution viewer, for example. Your preferences are saved to your hard drive. This month, we've moved the CDSupport drawer to the root of CUCD15 and added an 'Important' window as well. If you've customised your CD path entries to point to the new directory, Simply delete the 'System' part of the path so 'CUCD\System\CDSupport\box' becomes 'CUCD\CDSupport\box'. The CUCD preferences program can now be found in the top left of the CDSupport drawer.

What's in your drawers?



Real: As previously mentioned, the CDsupport driver can now be found in the root. The standard Workbench drawers icons have vanished (though the drawers remain) to be replaced with the CDsupport drawer and an opening Reading file. Trix, the ShapeShifter theme drawer and the main CUCD icon(s) be found here.

Trix: If you don't know what Trix is, greetings from planet Earth! Instead of reading this, you could be playing the Amiga's ultimate legendary flight sim. Go play!

Floppies: We like the letter V this month. So the floppy disks can run Video Earth, Visual Profs, Virtual 3D3 and Virus 2. Naturally they're all found ready to roll in this drawer.

ShapeShifter: A jumbler collection of ShapeShifter and Majordom emulation utilities. The latest ShapeShifter 3.8, Video drivers, utilities and MacOS 7.0.1 binaries and System 7.6.3 update.

CDsupport: The vital support files for the CD viewers, players. Don't ever forget the obligatory CUCDprefs program.

CUCD: This is where the vast majority of the CD hides. What wonders can be found within...
CDROM: The latest AmigaOS.

Amiga CD indexes, CD-ID collection and two audio CD player utilities.

Demos: AGA and GOS offerings to build your plasma and rotate your 3D world. Turn the lights low, crank your stereo and enjoy!

Game: This month's second theme is gaming, thanks to Trix, and there's enough games and game add-ons on CUCD15

to keep you going for a LONG time. A fast Shadow of the Thing II clone is an essential check-out.

Graphics: Animos, computers, viewers, utilities, Cyberform, Collors, icons, PhotoPaint, Picasso! and much, much more graphical delights for you.



Magazine: Fetch Amiga Basic and Amiga Basic to ASCII links to the GSA, questions this month. Also the database of CD Amiga issues.

Online: The new Cynopsis E-mail beta package, the superb Weather Experience (a concept in Wind World) are just a couple of the gems to be found.

Preview: Digital Out and Digital Universe demos, plus a CDsupport special with a Myst preview and... the blindingly good

Collapsing: demo
Programming: Code of all shapes and forms from the Cynopsis library, latest formal libraries and dev package should keep the coders happy.

Readers: A selected collection of games, utilities, pictures and modules from our own, wonderfully talented readers. See, you guys are just great!

Sound: All things sonic and noisy from the latest beta. I heard! Music 2.2, HyperPlayer, MIDI files, MP3 encoder and the latest player and so on, and so on...

Utilities: These random little gems that make the Amiga what it is. The latest MCP beta, Diviock demo, PICS, VIOck and more.

WWW: The big three web browsers, ArWeb 3.0, Browse 1.0 and Voyage Web demo. This is only made complete with an on-disk mirror of the one and only CD Online!



Disk doesn't load?

If your CD does not load contact DiskCypress on 01481 810788. If they advise that the CD is faulty send it along with a £30 fee: CD Amiga Magazine Disk Returns, DiskCypress, 7 Wilton Court, Bourton Industrial Park, Bourton on the Water, Gloucestershire GL54 9HQ.

Please note that some CDs will not autoboot on systems other than CDD3s, so try loading it from Workbench first. CUCDs will work with almost all Amiga configurations and Workbenches. However, we recommend older CD filesystems be replaced where possible. A non-working program is not an indication of a faulty CD!



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









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News

Gateway 2000 – Progress at last

After a few months of teething troubles, dealings and growing impatience from the Amiga community, things are beginning to look very good for Gateway 2000 and Amiga International.

Gateway 2000 have set up another subsidiary called Amiga, Inc. which will be based in Detroit. Running alongside the German based Amiga International, this company will be primarily concerned with the future development of the Amiga, leaving the sales and marketing aspects of the operation to Peter Tyschtschenko and Amiga International.

The new General Manager of

Amiga Inc. is Jeff Schneider, a Gateway 2000 man with a background in engineering and a broad edge of Commodore products.

Amiga Inc. have started the hiring process and hope to have 30 staff in place and developing by Christmas. According to Peter Tyschtschenko there should be a new Workbench 3.5 OS update released by the spring of next year at the latest, and new hardware by the winter of '98.

Initial development work will go into urgent updates of the OS, but there will, despite rumours to the contrary, be hardware developments. It has yet to be decided whether this hardware will be produced and sold by Amiga

International or whether it will be licensed for construction to third party companies.

It will be making their presence felt at the Cologne show in a big way held from the 14th to the 18th of November; this German show has traditionally been the biggest Amiga show in the world. It will have a large stand and hope to show off some newly licensed products. They will also hold a developer's conference, seminars and an exchange of ideas with Amiga companies, developers and users.

A recent summit, held by Amiga Inc. was attended by our US correspondent Jason Compton. For full details see page 18.



Golden Image get ConneXion

Golden Image are offering a new Zero FilterNet solution, the ConneXion card. This networking solution provides a 10 Base 2 BNC Ethernet link. Using the AUI interface, a standard RJ45 transceiver allows adaption to alternative standards such as 10 Base T. The card comes with autoconfiguring ROM based software called Netvision, negating the need to install separate drivers. Netvision software is currently running on Amiga and OCS systems, with Windows, OS/2 and Novell versions under development. Basic compatibility is also provided, using additional driver software.

The ConneXion card runs at a standard 10Mbits per second, but benefits from a 32k on-board cache reduce CPU overheads. The card is available now for £175. Call Golden Image on +44 (0)11 800 8291.



Micronik North American distribution announced

Micronik, of Germany, suddenly a super-high profile Amiga licensee, has chosen North America! Distributors for its new Amiga clones. According to sources within Micronik, Paxton Corp. and GPM have been selected. Both companies plan to offer direct sales as well as dealer channel sourcing.

The move should finally bring reasonably-priced A200 tower systems to the US and Canada. While tower kit imports have been done in the past, they have typically been in very short supply and expensive. GPM's projected prices between £180 and £185 for the Micronik units, depending on configuration.

Reach Paxton online at www.paxton.com. GPM are at www.gpm.com. And Software Hut at www.sphut.com.



Magazine shake-up: Two titles close CU Amiga becomes UK's biggest seller

There has been much noise on the Amiga magazine front. The last month has seen the closure of two more UK Amiga Magazines, Amiga Review, the black and white mail order only title, and Amiga Computing, the glossy newsmagazine title which for so long was a valued alternative to the big two of CU Amiga and Amiga Format.

Amiga Computing's demise has been widely attributed to their decision to stick to floppy disk only power mounts. Editor Neil Moly told us that he felt the management had not taken enough steps to make the title competitive in a market which has become increasingly difficult. Apparently AC had been selling about 8,000 copies a month and turning at a small profit, but publishers GDC considered it time to move on to more profitable areas. Amiga Computing was held in high regard at CU Amiga, and we're sorry to see it go. Our best wishes for the future go to all at AC.

On a more positive note, the latest official circulation figures for UK

magazines have been published by the ABC auditing organisation. CU Amiga's circulation has dropped by a mere 2.7%, healthier than the recent 20-25% drops the sector has suffered. CU Amiga outsells any other Amiga magazine in the UK, regardless of format, and is the UK magazine of choice worldwide, selected by resubscribing purchasers over 10% more often than our nearest rival.



PPC gets even faster!

New 'quantum micron' manufacturing processes have allowed Motorola to offer the PPC045 chip to run at an amazing 300MHz.

The 200MHz version of this chip is at the heart of the top of the range PPC boards from Phaze6, and although they have not yet made any statement on the matter, it seems likely that they will support this chip in the future. Assuming a magnitude of 1.2 cache, the 804x586

is benchmarked at an amazing 14.8 SPECintR8 and 9.0 SPECfpR8, making it the fastest high volume CPU available today.

Also announced is the new low power consumption PPC 750/40 series of processors. Utilising an integrated level 2 cache controller, and GDC data and instruction caches, the 260MHz 750 is rated at an estimated 12.4 SPECintR8 and 8.4 SPECfpR8.



Made for KIDS

Myteq software has announced an initiative to promote the use of the Amiga as a family computing platform by encouraging and organising support for software aimed at children. The web site can be visited at <http://www.myteqcorp.com/madeforokids.html>. The main aims of the Made for KIDS project are to:

- Gather together a range of quality Amiga Software for children.
- Make this range available through a new section of the Amnet - myteqids.
- Promote use and development of Amiga software for children.
- Ensure next generation Amigas can compete with the PC as a family computer.



Imagine add-on released

GDC publishing have recently announced the imminent release of ImagineEX, which is an add-on for the popular Imagine rendering package. Combining a broad selection of presets and templates, ImagineEX promises to significantly improve the often criticised working environment of Imagine.

Designed to be compatible with all versions of Imagine, ImagineEX contains features such as a scrollbar gadget to allow easy selection of groups, objects, faces and points, including multiple selection, and two quick rendering presets called 'pixel burners' designed for ultra fast previews.

ImagineEX will be sold direct from GDC publishing for £24.99 including a full manual with a leather look binding. As an introductory offer, GDC are offering ImagineEX to their first 200 customers at a discount £15. Expect to see a review of this product in the near future.

GDC Publishing can be contacted by post at: 71 Melville, Wilbury Road, Hutt, Hants GU8 5ED, UK or by telephone on +44 (0)1482 520587.

News in Brief

West Science tell doses

West Science's new hardware showroom has opened, selling an assortment of accelerators, CD-ROM drives, towers and add-ons for Amiga users on the upgrade path. AmigaGold products are the new range of tower Amiga boxes from Missouri. The 1280 is priced at £249.95, the 1400 with 20mb2 at £289.95 and the 1500 at £399.95. West Science sell these towers with 8 speed CD-ROM drive and a 1Gb hard drive for an extra £150. West Science can be contacted on +44 (0)118 246 3800.

Click&OOM introduce on-line shopping

Click&OOM's parent company, PHL computers, has introduced an 'on-line shopping mall' from which internet users can purchase the company's products and a select range of other titles. The web-based mall was introduced in response to the problems Amiga users worldwide have in locating electronics. Click&OOM provide promotions and competitors for visitors to their website. Click&OOM can be found at <http://www.clickboom.com>.

Valcon opens US branch

Valcon software have opened a US branch to cope with North American distribution of their products. Valcon, the games company behind the 1000000 series and other such as 1000000 Ltd, Jet Pilot, Burnout and 1000000s 80A are expecting to release some major titles over the next few months. Contact Valcon UK on +44 (0)1783 830285 and Valcon America on 1-866-426-7667.

Sideshow CD price shock(er)

Sideshow has cut the price on direct sales of his Future Shock II CD to \$10, plus \$2 shipping world-wide. The 74-minute disc has a few of his favourite and more popular tunes, including the title track to the shareware game Sideshow Tanks. Sideshow has had his music played at dance clubs due to the techno nature of his music and it confirms how far his music is a doorway for in the back cover's CDs are in limited supply at this low price. Contact Sideshow Productions: 9811 Cape Valley San Antonio, TX 78229 USA.



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Stateside News

by Jason Compton: Jason Compton is Editor in Chief of Amiga Report Magazine

More Amiga Shows

The expo scene has been a little sluggish in 1993, although Amiga, Inc.'s Derrick Lisle hopes to change that very soon by supporting the upcoming Amiga events and planning a trade in Gateway's home town within the next 6-12 months. Rumors of a winter show in Toronto are surfacing, but the QMG Midwest Amiga Expo is the only show that looks to actually happen this fall, although some smaller user group events are already going on.

The problem in the States is that a user group show can easily be thousands of miles away from a pocket of users who would want to go. I'm sure the Amiga users in Toronto would love to hang out with users from California, but the mileage is just too much.

Peace breaks out

It was thought for a while that

quakes might be between Amiga, Inc., QuikPak, and Lotus Pacific. Instead, however, all indications are that Amiga will be coming to mutually beneficial agreements with the two parties whose businesses rely on the Amiga technology.

As you may remember, QuikPak produced the A4000T in the US, fabricating parts and motherboards and assembling the machines for sale in the US and abroad. Often, the motherboard was provided to Eagle for conversion into a much more interesting tower case.

QuikPak has almost disappeared from the public eye since Gateway bought Amiga. Details are sketchy, but it seems to relate to a dispute with the Ecom bankruptcy estate for services rendered and money owed. In a recent statement, QuikPak indicated that they would meet with Amiga, Inc. to iron out an agreement that would allow

QuikPak to move ahead with their long-planned A6000-based portable and a low-end model they have designated as the "1600".

Lotus Pacific acquired the Chinese rights to the Amiga from Righttime in a deal Amiga, Inc. immediately challenged. However, indications there too are that Lotus Pacific and Amiga may be able to reach a solution without a long costly battle.

Righttime claimed to have secured a license from Ecom (the so-called "Chinese deal" we heard about), but Amiga, Inc. maintained that the Gateway purchase was for the worldwide rights to the licensed copy. In the meantime, the Chinese have begun promoting the Wonder TV A6000, their Amiga-based entry into the Chinese set-top market.

Change isn't necessarily bad. After all it's living during the stag

The 'Zine scene

Amiga news sources keep in the States have undergone some changes lately. The loss of Amiga Computing was felt here as well, as CD had a special US Edition of AC to replace Amiga World, which it closed just before Ecom bought out the Amiga. The US Edition never got up to speed here, plagued by distribution and production problems from the outset.

Amazing Computing, the world's largest Amiga magazine, is still managing to keep ticking along as our only native monthly, and there is a young Turk called the Informer who has made some waves as a bi-monthly. Of course, many choose to pick up CU from a dealer or bookstore for the expanded coverage. Gaming and Informer are shorter than CU or for the newer CDs and floppies which American magazines don't offer.

Addendum

Project XG

Maple's address is as follows: Maple HPS, PO BOX 737, Rayleigh, Texas 77865, 17772-664000. The case should be a Veebox 305, order code 4957 or 04-58 + VMT. The code 17723 is the total, making 49801. Don't worry about the incorrect drive for the 10K pit, the price is correct on the net.

Figure 2 had a few errors. Here is the correction which matches the circuit diagram in the feature.

The instructions describe placing of two resistors on the Amiga suite in phone jacks also illustrated on fig 3. This is, however, they should be con-

nected to pins 36 and 39 on the DMS00C header. The audio wires going to the volume control there, those pins should be connected to the other end of these resistors. Use tape to insulate the exposed resistor leads.

The diagram here for the 25 pin serial and 23 pin disk drive connectors are viewed from the solder side. Connected pins are marked in

red. There's been some confusion about the pin numbering on the DMS00C. Pin 1 is against the corner of the board. Disk driveboard pins are towards the outside of the card and audio pins are inside. Please note, the IC socket has been illustrated upside down, as you'll solder on to it (unlike the DMS00C header). Check the match on the IC between pins 1 and 14 for orientation.

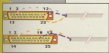
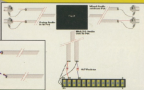
We apologize for the errors in the feature. Our future GDI features will be more clear, reader to construct and yet easily fit in shaping as Project XG.

Next month's project will be "Hot Link" and we'll be taking the revolutionary step of downmounting the PCB and working closely with an electronic kit company to take the parts and box specifically to the Amiga. Your Amiga will take control of your remote control appliances and be controlled with any of their remote controls. APL Link only with CU Amiga, don't miss it!

Vista Pro fix

It has happened that on some systems when Vista Pro is launched from an FTG Igraphics board screen, the program will exit without any error reports. The solution is to temporarily change Windows to a native screen mode and then launch the program as normal.

There's also a fault with a script file which launches Vista Pro. This affects only those with no GPU on their Amiga. In the Vista Pro directory, there will be a file called VistaPro32. Edit this AmigaDOS script with a text editor (type 'Ed VistaPro32' from a shell) and move the Stack 300000 command to the top and change it to Stack 50000. Please accept our sincere apologies for the problem!



Amiga, Inc. Summit

In mid-August, Gateway 2000's new subsidiary Amiga, Inc. held a summit at Gateway's USA headquarters. Our US correspondent Jason Compton was invited to attend this historic event.

Jeff Schneider, General Manager of Amiga, Inc., the new wholly-owned subsidiary of Gateway 2000, is a man who knows how to listen. Jeff, along with Peter Tschetschke and Schneider's assistant James Tippett hosted a summit with seven noted members of the American Amiga Community.

The bulk of the guests were from the ICQA, the industry Council of the Open Amiga. This group is an independent body set up to promote a variety of standards with the hope that they can avoid division and over diversification in the Amiga industry. Gateway 2000 has shown a lot of interest in the ICQA and, if nothing else, this summer will show that the new owners of Amiga are more than willing to listen.

Of the seven guests, five were directors of the ICQA, one was Amiga's unofficial first engineering hire, and one was our man in Atlanta, Jason Compton, editor of Amiga Report Magazine. Jason takes up the story.

Cast of characters

Some of the names will be immediately recognizable by Amiga fans - Andi Pinkal, of Commodore's new AmigaOS development firm and Dean R. Brown, the DRE in American Amiga hardware manufacturer DBI) were the veteran stand-outs. Alan Peters, Vice President of Finite Development software, Jess McCleary, a Boeing engineer, and Paolo Moss, a contract systems designer rounded out the group of five.

The final attendees might be the least famous. Joe Torre - a hardware engineer who has worked for a number of firms, most recently Scientific Atlanta - is unofficially Amiga, Inc.'s first career entry on the engineering team. Joe has designed custom accelerators for Alpha-based Amiga video professionals around the 300 and 600 chips, including multi-FPU configurations for super-fast rendering.

I spent alot of time with Joe over the weekend, as we were already acquainted from my involvement with the Amiga Atlanta user group. Joe has a great deal of vision for the Amiga, and a lot of respect for his past. So much, that he pointed out instances of "incoherent" being built - apparently Joe has the specs of the "real" being built from Dale Luck, who created the logo.

Another name that might need some introduction is Jeff Schneider. As the head of Amiga, Inc., he will be deciding the future course of the Amiga, so we will all be hearing a lot about him over the coming months. He has been working of a question mark, so here's the SBC bit: Originally an engineer, Jeff Schneider worked in computer sales in the early 80s, joining Commodore by 20 and 64 computers.

The highlight of his tenure with

Gateway was successful leadership of the team that designed the Destination big-screen TV PC-pal it a marketing ploy if you will, but the Destination, bundled with a high-quality VCR and built stereo sound has gone over very well with people looking for a classy family PC. Now that the dust is in place, let's get back to Jason.

"While I was not a part of the ICQA meeting with Gateway General, I was involved in an informal marketing discussion with Peter, James, and now Amiga, Inc. Vice President, I did help the group brainstorming session. Amiga, Inc., and the ICQA want to find ways to work together, and from what I gathered, they felt very confident that this would happen in the near future. Most seemed impressed by the advanced levels of planning at Amiga, Inc. - proving once again

that even if they don't, maintain you with press releases, a company can really have their act together.

Big building

James Tippett treated all of us to a first-hand look at the new Amiga facilities. Anyone who needed convincing about the commitment the new company would have been pleased with what we saw. The first office will be nothing special - two large rooms plus a lounge on the second floor of a two-story office building located in the "Gateway park". No windows, overhead fluorescent lighting, but it is being made livable. I set up the office's first Amiga, a sleek A1200 with a 13" kitchen colour TV in temporary configuration, to use the test!

Projected for October 1 is completion is what can only be called 'The big building'. Amiga, Inc. was able to get a lease of 300 of the building for a song. It's a beautiful thing even in it's half finished state - lots of windows, very airy, and very visible from the highway, sporting a number of us to propose massive Amiga signs on the roof.

On the Wednesday night, after the ICQA decision left, I met with Steve Johns, who helped make the Amiga deal happen for Gateway. He visited us all well. The Amiga is still finding its footing with the new Amiga, Inc., but the people there are genuinely trying very hard to make things happen.

At one point, James Tippett expressed amazement at the amount of work he and Jeff had done to get Amiga, Inc. up and rolling inside or less on their own - turning around his chickens with his hands cut off - and wondered if anybody else had it easier. I assured him that no, I find pretty sure that one company's effort big or small, always starts with a few people working day and night to make it theirs come together.

That's what I saw, and I came away from there thinking that we're going to be in for something really good here! ■

Jason Compton



▲ From left to right - Joe Torre, Alan Peters, Paolo Moss (yes, that is his real name), Dean Brown, Jess McCleary and Andy Pinkal.



▲ Jeff Schneider takes the game for a test trip. Looks like Henry only just got up...



▲ Jeff Schneider at the table - a positive Peter Stone is presenting the idea of starting off.

Now boarding...



Yes indeed! It's actually, finally, really here! Tactical Fighter Experiment, or TFX to its mates, is truly the most amazing action flight simulation your Amiga has ever seen, and it's all yours courtesy of CU Amiga Magazine.

T.F.X.

For those who just can't wait to get airborne there's a quickstart guide on page 22. You'll find more in-depth information on the following pages. But first, just what is TFX, and how come we're giving it to you?

Those with abnormally good memories will recall TFX made its first appearance in CU Amiga back in May '83. You're forgiven for it having slipped your mind, as it was

called *Inferno* at the time. Its developers DID had recently delivered the excellent F-26 Retaliator (rather later than planned), and *Inferno* was being touted as the first of a new generation of flight simulations. DID told us it would be released in October, meaning of course October 1983. Somewhat suspicious since the delay with F-26 Retaliator, we rather optimistically commented "but if we know DID,

that's probably October 1999!" Little did we know it would be October 1987 and it finally got its long-deserved release!

Those initial rumors from DID were enough to get us on a day-to-day basis to know we were in for a long wait. I remember it well (Gary Ed. joins by the way). There was barely an Amiga in sight, but a PC in every desk in the large DID office was running one version or another of TFX.

Loading instructions

Installing TFX from CD

Clicking on CU0015, you'll find the TFX driver inside. You'll find three icons for TFX for different types of Amigas, the TFX 68000 version will work on any Amiga as if the other version didn't, then try this one.

However, the other two versions will be faster if you have a math co-processor and TFX also 68002 or a 68040 based Amiga. If you have a math co-processor, the TFX 68040 version should be much quicker so will TFX 640 or 68040 based Amigas.

There's a handy icon for setting up the control device and control levels etc. Installing TFX is simply install. You can either run the provided TFX installer or drag the entire directory over to your hard drive. If you're doing the latter, you'll need 17MB of hard drive space (but you can delete the 700k floppy directory which is 7MB of this).

Installing from a PC

If you're using a PC to access our CD-ROM, we've provided a TFX archive already split into 700k chunks. OS 3.x Amigas come with Decompress as standard and you'll need to have this installed to read PC formatted CD floppy disks. Usually obtained by dragging the PC icon from devolution.com/drivers/ to dev/ios-drivers drawer or just clicking on it.

Copy everything from this drawer to floppy disks on the PC. Then copy all of the files to somewhere on your hard drive on the Amiga. At the end, rename the

unpack led to unpack left and you should be able to see an Unpack icon. Click on the icon and TFX will then be extracted to your hard drive. You can then delete the temporary files.

Installing from floppy disk

If you bought the floppy issue, you can obtain TFX on no less than seven floppy disks for the bargain price of £3.50 + 10p P&H (see page 7 for the full details).

When you've obtained the floppy disk page, disk 1 is the installer disk. Insert this disk and run the install icon. You'll be prompted as the installer joins up the data from all the floppy disks and then unpacks it all.

You will need about 16MB of hard drive space free and then you'll have a drawer much the same as the CD drawer with the three TFX launching icons as detailed in the CD section here. Enjoy!



Some were testing the flight model, others were compiling test versions of specific scenarios, while others were simply driving off and playing the game!

Even though this was all PC based, CDS seemed to it would be transferred back and forth to the Amiga with no loss of quality, now for a slight dip in speed. At that time, the A1200 was Commodore's new baby, but true to their forward thinking attitude, CDS were already confirming that TFX would be AHA only due to the high system requirements.

Back we come, ladies down with screen shots, lists, photos of the team and a whole lot of experiences. Then we waited, it waited a bit more. Then we gave up waiting so it seemed the Amiga version was never going to appear. When asked why it was taking so long, the response came that although the Amiga conversion was 95% complete, the then popular 2MB A1200 just wasn't enough to do it justice. So fast 6868 and a 68000 to 68030 CPU just wouldn't compare to the 68040+ PCs it was originally designed for, and that was that. Never mind, we had plenty more games to keep ourselves amused with back then. It wasn't until things started to dry up on the Amiga games scene that people remembered the next generation flight sim they'd been promised a few years ago and started demanding answers. Demanded for a release of TFX made sense, but still nothing came from its proposed publishers Ocean, so we thought it was high time we stepped in to blow the dust of this never before seen masterpiece.

Whether you've been waiting for this game since the year dot or if you've never even heard of it before is totally irrelevant. At least it will be once you start playing.

TFX is a flight simulator for everyone. It's got all the realism you could ask for and action that'll make your palms sweat buckets. Above all it's got an atmosphere like no other game in the world. You might well think that because it was never released, the game probably has holes all over it, with unfinished business here and corners out there. Not a bit of it.

This is a complete, fully fledged flight combat simulation with a full range of missions, five conflict theatres and various different options to take you from a rookie in training school to a seasoned and decorated top gun.

If you're the type of person who likes instant gratification and can't be bothered with all the blarney that surrounds most simulations, then you'll really love the Arcade mode. This drops you right into the thick of the action and tests your dogfighting skills to the maximum.

On the other hand, maybe you prefer to



get nice and comfortable with a cup of tea, plan a route on your maps and then take to the skies for a good day's flying and a touch of sight seeing.

No problem! There's the Simulation mode for you, which gives you the option to select any of the five varied scenarios and puts you into a 'no cometside' mini mission which can be played either as a one off, or even completely ignored in favour of taking in the scene of the scenes.

Perhaps you like to sign yourself over to the airborne armed forces and dedicate yourself to the pursuit of peace? Oh, well how about the 'Four of Ours, in which you'll be fully trained and then sent out on a long string of missions as a UN peace keeper, seeing the beauty of the world and then blowing it sky high. Whatever type of player that you are, TFX is definitely going to give you months, if not years of satisfying and engrossing gameplay.

So, all that's left to do now is get stuck into the action!



Continued overleaf ►►►





Quickstart Guide

Getting started

Press the right mouse button to skip past the Credits and on to the first options screen. This gives you the choice of creating a new pilot or continuing a previously saved game.

Create a new pilot

The first thing to do then, is enter your full name and your call sign – a nickname that's used for clearer communication. Next, you need to select a game save slot for your new pilot. Double click any of the blank ones. You can now take your pick from the list of five game types. Arcade mode drops you into a daylight situation for some instant action. Training is the sensible option and the one that starts you off on your career as a top gun pilot. This breaks you into the game and acts as a kind of qualifying stage for the real deal missions.

The simulator option is good for checking out the five different scenarios (Europe, Middle East, Atlantic, West Africa and Central America). This also gives you the option of selecting six different weather and time settings. The cloudy scenario has real cloud cover – try flying up



through it to the blue sky above. The night and storm settings are surprisingly realistic too. You'll find plenty of things to do here but won't have any hard and fast missions to carry out. Four of Duty is reserved for those who have passed through the training ranks. Finally there's Flash Point, which also requires training to have been completed. Training might sound a bit boring but it's not, and it's worth earning your wings as soon as possible so as to get on with the four of Duty. You'll also find the training schedule is quite addictive, with a variety of mini-missions to be taken care of, based in various scenarios.



Load previous game

You can take a short cut into a full game by selecting Load Previous Game from the initial option screen. This allows you to select one of a few previously saved game positions from disk. Select one of the 'Quick - Inferno - Loose Cannon' slots to be dropped straight into a 'hot'. You'll have the mission briefing displayed for a short time only, so make sure you jot down the basic gist of the mission and any co-ordinates that are mentioned. Watch out for further messages and updates appearing on the scrolling text display in the cockpit. These also appear on external views.

Taking off

Getting airborne is pretty easy once you know what to do, but blowing up before you've left the runway can be a bit embarrassing, not to mention annoying at first. Follow these steps:

1. Turn on both engines (J and K keys).
2. Increase thrust using the M key.
3. Overpower wheel brakes (W).
4. Proceed along runway to gain speed.
5. Lift nose gently at speed 150.
6. Pull up the landing gear (G).



Picking off bogies

If there's one essential skill you need for Tex, this is it. Fortunately the first training session drops you into what is virtually a no-loss situation to get you into the swing of things. Your arsenal of air-to-air missiles brings a clinical edge to the proceedings, although once you get into a real daylight situation you'll find it's not quite as simple as it was in training.

Not all the weapons work exactly like this, but here's a basic guide to stitching up the enemy with a guided missile launched from the Eurofighter.



- Pick out a target and get on the ball with the help of your radar, lining up the red blob in the top.



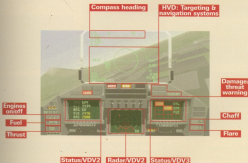
- Select an appropriate release (Retro) and keep it in your sights as the color gets a hint.

TTF Keyboard controls

Escape	Speed/Quit	Z	VDU 2 display	J	Engine 1 on/off
F keys	Views	3	VDU 3 display	L	Engine 2 on/off
F1	Cockpit	4	Save game position	Return	Weapon select
F2	Virtual cockpit left	5	Auto stick pressure	4	Airspeed
F3	Virtual cockpit right	-	Decrease thrust	5	Stability
F4	Reset view	=	Increase thrust	0	Landing gear
F5	Tracking camera 1	B/Space	Ground target	8	Head
F6	Flyby tracking camera	Tab	Auto recovery	1	Landing system
F7	Tracking camera 2	Shift + Q	Quit	8	No landing
F8	Missile view	W	Wheel brakes	M	Map
F9	Enemy view	R	Radar scaling	*	Max power
F10	Virtual cockpit centre	T	Time warp	9	Cockpit up
-	Settings	I	Information	0	Cockpit down
1	VDU 1 display	P	Pause	Help	HAL/WTSC



The TTF Cockpit



▲ Before the engine shakes off the back, the fuel gauge is still a reflection of the engine's status.



▲ Use the missile view to track the enemy as it moves and back to home in on its target.



▲ Per yourself on the back as the engine takes a hit and drops into a flaming descent spiral of doom.



Configuration

Detail settings

You can change the amount of detail in a number of ways in order to get the best trade-off between speed and visuals. Press the \leftarrow key below 'Detail' to access the configuration menu. From here you can make a few general set-up changes, such as joystick sensitivity, music, sound effects, world detail and the flight model. Click the 'Detail Menu' button to change specific aspects of the display. This allows you to specify the graduation of the sky coloring, turn textures maps on or off, enable or disable ground shading and decide whether the weapons will be visible under the planes. You can also choose whether to have the different views snap from one to the next or to have the seamless pan to the new view. Try cranking all the detail levels up to maximum at first, then if you would like some more speed, take out the elements that you think are the least important.



Virtual cockpit

One of the many innovations in TFX is the virtual cockpit. This gives you a feeling of actually being there that's just not possible with the usual fixed position cockpit view. Accessed with the F4/F5 keys, it allows you to look around from left to right as you would be able to if you were sitting there yourself. Turn the texture maps off if it causes the game to run too slowly.



Cockpit and exterior views

No decent flight sim would be complete without a range of different view points, and TFX has a stack of them. Below below has an Amiga flight sim had such detailed and realistic planes, and consequently these are the best exterior views you're ever likely to see in an Amiga flight sim! You can switch from one to another using the function keys. As well as being good to look at and impressing your mates with (especially the Hi Fly-by view which comes complete with 'breaks' sound effects), these are often very useful for getting a better idea of your surroundings. The rear view comes in especially handy for glazing at a ground installation you've just reduced to rubble as you power off up into the sky, or at least checking that you're in the target on a slower angle ground-based attack.

Realism settings

Not to be confused with the graphical detail settings, the realism settings control how harsh or forgiving the game is. These are reached via the same overall configuration menu that leads to the detail controls. For example, you can set the game up so that it's impossible to crash. In the real world, flying at high speed with your landing gear down would damage them, if not rip them off altogether, but you can opt for unbreakable landing gear. There's variable wind, rain and temperature conditions too, which can be enabled or disabled. You could turn all of these off for a more arcade-style effect, or to make the game more playable for anyone less proficient at flight sims. Turning off crashing is a bit of a cop out but can be useful if you find yourself continually plummeting earthwards.



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Know your hardware

Navigation and tracking

All the planes come complete with advanced tracking devices and maps of the areas in which your missions take place. It's essential that you know how to read and use these devices if you're to be able to find your prey, avoid being hit and find your way back home after a successful mission.

You can view the maps opposite at any time by pressing M. The maps you'll see in the game also show tips to indicate friendly and enemy activity. The green and blue tips are friendly, while the enemies show up as red. Flashing red dots indicate primary targets. You'll often be given a grid reference during the mission's briefing to tell you where your target lies. Check the grids overlaid on the maps opposite for a quick idea of where you should be headed.



reently selected weapon will attempt to lock on to it. You'll know if you've got a lock with an air-to-air missile as the floating diamond on the HUD will mean up with the square around the target. You should also hear your on-board computer announce that it's "tracking..." the enemy. The air-to-ground weapons work in a similar way. If you can't get a lock on your ground target for any reason, a bit of sharp shooting with the cannons will usually do the trick.

Once you've got your lock, you can tell the Spectator to the sound of "Missile away!" from your friendly in-flight computer. If you don't need to take any immediate evasive action you could switch to the enemy view or even better, the missile view to watch it home in.

Getting a lock doesn't necessarily mean you'll get a direct hit. A good bit of flying from the enemy can shake off a missile, although the missiles themselves don't give up without a fight.

Weapons

Your weapons fall into two basic categories: air-to-air and air-to-ground. Use the Return key to cycle through your air-to-air missiles and use the Backspace key to activate air-to-ground weapons. You also have a cannon for when all else fails. This can be used to shoot down planes and also to destroy ground-based targets, but ammunition is limited and so is its range.

If you have a target in view, the cur-

Compass bearings



Your Head Up Display (HUD) includes a compass to show which way you are facing. 0 degrees is North, 90 degrees is East, 180 degrees is South and 270 degrees is West.

Arming your plane



You can swirl through the arms on the right, then drag and drop them on the plane to load up manually. Alternatively use the Default arming button.

Lockheed F-22



An incredibly versatile plane, the Lockheed F-22 was designed to scramble from both land and sea via aircraft carriers as and when required. Its strike potential is equally varied with the ability to take out air and land-based targets with a range of modern "fire and forget" missiles and bombs. While not the most attractive of the three on offer, it's the only one capable of sea-based missions.

F-117A Stealth Fighter



The famous F-117A Stealth Fighter also comes from the Lockheed camp, and marked a significant step forward in stealth technology. It has since spawned the stealth bomber, which was used most publicly in the Gulf war, with the precision of its air-to-ground strikes making headline news. Although harder to detect than other planes, the F-117A is by no means totally "invisible".

Eurofighter



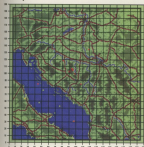
Based on the French Mirage jet, the Eurofighter 2000 was commissioned as a cost-effective state-of-the-art jet fighter for European security. Like the Lockheed it too is very versatile in its ability to carry out a wide variety of strikes effectively. It also offers Stealth properties, with short take off and landing abilities, high agility and extensive configurable payload options.

e Maps

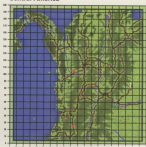
To help you get about in your missions we've included maps of all the areas, complete with grid references that don't appear in the game.



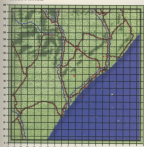
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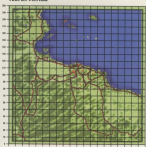
Central America



West Africa



North Africa



Continued overleaf ▶▶▶



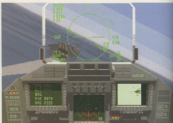
Technique and Tips



Landing

The initial training missions don't require you to actually land your jets after you've hit your targets, but once you get further down the line, and also in the *Four of Clubs*, you'll need to return to your airbase or your aircraft carrier to complete the mission. Landing is a tricky business. You can't just go hurtling towards the strip and hope that slammering the anchors on at the last minute is going to be enough. So let's take a look at landing on an aircraft carrier.

The first thing to do is get lined up with the strip. One of the best ways to do this is to take a flight over the deck in order to get a good look at the runways. Once you know the lay of the land, get some distance between yourself and the runway using the *Timeaway* function if you're impatient and then turn back and level up with the runway. Take your altitude down to around 500 feet and hold it steady. As you get closer, put the



airbrakes on and reduce the thrust to about 50%. If you don't use the airbrakes you run the risk of stalling the plane. Next put the nose down slightly and start the final descent. Remember to put the landing gear down at this stage. Aim to make contact with the runway at an shallow an angle as possible, and once you've touched down, put the wheel brakes on and cut the thrust totally. The plane should come to a halt, safe and sound on terra firma.

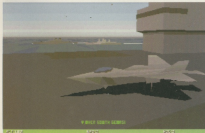
Carrier landings

Now this is a bit more difficult. Just about

all of the land-based procedure applies here but now you have a much shorter landing area, and you also have to contend with it being stuck in the middle of the sea.

Judging the correct descent altitude is the hardest thing here. As before, buying the aircraft carrier is helpful, if for no other reason than to make sure you're not attempting to land on one of the fleet's battleships!

Since the danger of oversteering is obviously very high when you're landing on such a small area, you need to employ your 'hook' to bring the plane to a stop before it falls off the end of the ship. Remember to put your hook down when you touch the landing gear. Also beware of coming in too low and crashing into the end of the boat.



Dogfighting techniques

It costs American taxpayers millions to send a pilot to the Top Gun Academy to learn to be a combat pilot. Here's the patented *OU* Airage tip version.

The Immelman:

A complex barrel roll/loop which allows you to get the jump on your foe. *OU* Airage advocates not bothering.

Coming Out Of the Sun:

Another top gun flier. Requires lots of sun tan lotion and good air conditioning. Too much effort.

Getting stuck in:

Now this is the tactic for us! See the enemy, change to headshot cannons, fire, watch missiles like there is no tomorrow and blow them out of the sky! Remember - it's only a game.

The Best bits

In case you hadn't realised yet, TFX really is amazing! Here's a quick tour of some of the best and most unique bits of the game...

Mountains

Yes, we've all seen little pyramidal hills before in the likes of *Gunship*. But you've never seen anything like these before: sharp-capped peaks and extensive ranges of mountains and foothills give the landscapes more realism than ever before. They're not just there for show either. Make sure if you set your sights on a waypoint and go off to make a coupe that you're not headed for a collision with one of them!

Texture maps

Now common on other platforms, texture mapping is still rarely seen on the Amiga outside of 3D rendering packages and PD demos. TFX uses them mainly for its virtual cockpit, in which you can see limbs and the engine move around your field of vision as you bank and climb through the skies. There's also a nifty little UK logo on the tail fin of the Eurofighter 2000.

Gouraud shading

When combined with the models of the planes, the ground installations and the mountains, the shading gives everything a convincing solidity that's missing in most paper-pan flight sims. It's this which casts the mountain ranges with snow, creates rock-ice washes behind the battleships and even brings the explosions to life.

Clouds

You thought you'd seen clouds before didn't you? Well we're not talking about two dimen-

sional polygons that sit up at 5,000 feet like some kind of magic carpet. No, these are proper, real clouds made up of lots of little clouds. Go into a climb on a cloudy day and watch as your view fades to grey. Keep going a little further and you'll emerge into the clear blue sky above.

Night flights

You might think that being assigned a night mission would be a bit tedious. Nothing to see except the inky blackness, right? Well, that would be true in most flight sims, in which the scenarios consist of a plain, two roads and a shed. But TFX goes out of its way to bring you full illuminated cities. You could almost believe that you were flying over Las Vegas, except Las Vegas isn't one of the scenarios.

Massive worlds

And another thing: there's over three million square miles of terrain and airspace to cover in the game, all taken from real official map data! That adds up to 1,400h of the world's surface area. There's islands, deserts, cities, rivers, bridges, roads, canyons... you just keep discovering more every time you play.

Next Month

We'll be bringing you more hard facts and tips for this awesome game in next month's CU Amiga Magazine, so make sure you don't miss it.





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Party Games *Don't drink and drive!* This is the motto for the party game *Don't Drink and Drive*, from the publisher of the popular *Don't Stop the Music* board game. In this game, players take turns drinking from a glass and then driving a car. The game is designed to be played in a bar or club, and the goal is to see who can drink the most without getting too drunk. The game is available for purchase on Amazon.

THESE DAYS, when you're not getting your daily dose of *Star Trek* from the TV screen, you can find it in the pages of *Star Trek: The Motion Picture* and *Star Trek II: The Wrath of Khan*. The two new feature films are the first in a new series of *Trek* movies, and they're both excellent. *Star Trek: The Motion Picture* is a masterpiece of science fiction filmmaking, and *Star Trek II: The Wrath of Khan* is a masterpiece of science fiction storytelling. Both films are based on the original *Trek* television series, and they both feature the same cast of characters. The new *Trek* movies are a must-see for any fan of the series, and they're also a great introduction to the world of *Trek* for newcomers.

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Three donuts are shown on a plate. One is a chocolate-glazed donut with white sprinkles, and two are plain chocolate-glazed donuts.



Suzanne

The Portable Amiga

This month's DIY Scene tells the story of one man's mission to construct a portable Amiga. Simon Archer recounts how he built 'Suzanne'.



This feature follows in the trend of the DII series, but is not intended as a "how to build a portable Amiga" tutorial. The techniques involved are clearly well beyond the capabilities of most DIY-inclined Amiga users.

However, they may be useful to readers willing to modify their Amiga setups, as DIY "tweaked" Amigas become more popular with Amiga owners.

Those who attended the recent "World of Amiga" show in London may have seen "Suzanne" at the DJ Amiga stand. Suzanne is a portable Amiga 500 complete with its own power supply but no batteries. LCD video to CD-ROM stereo sound, 80000 accelerators and Sixpoint touchpad as a mouse replacement. This would be impressive enough coming from a commercial company like the mythical PANIS system but it's a very original given that it's one man's part time DIY project.

Suzanne's creator, Simon Archer, gives his account of how he constructed Suzanne.

Donors to the rescue

The idea of building a portable Amiga was one that I've always been keen on and the first donation of a monochrome LCD VGA monitor seemed a very good starting point. The next step was to decide which Amiga it was to be based around. Because of its size and the fact that they were easy to obtain, the A500 seemed a likely choice.

So with began considering up the components. A quick scan of Amiga revealed the one to connect up a VGA monitor to the Amiga's 20 pin video port. After constructing the adaptor, and connecting the monitor, it still shows a PAL screen. After a quick mouse driver change to MULTISCAN

Productivity and palette adjustment, away it went. It was necessary to alter the palette wiring as the LCD displayed some "other" sets of chrominance with the default palette wiring. Chrominance is caused by two colour lobes being placed next to each

other resulting in interference at the pin of the colour. Slight adjustments at a time were made to achieve the optimum display. This was a critical step in the project, because if this stage hadn't worked then the whole thing would have been a waste of time and effort.

So the setup now consisted of a monitor with power supply, A500 with power supply, external disk drive, mouse and mouse mat. Hardly portable! The whole lot was installed into a flight case, and it became a movable object, albeit bulky. This installation lasted quite a while until the time came for a little more power out on the road. I took the decision to upgrade the machine with an Apollo A500. This gave the machine a whole new lease of life but also quite a few headaches. The accelerator card is not one of the easiest cards to fit and once fitted it refused to stay there.

Because of the design of the A500, with its surface mounted technology, there is no real way to expand it. Apollo have got around this problem using a PLCC socket underneath the accelerator to clip on top of the 68000. This doesn't work very well, as the socket keeps working its way free. Once the casing of the A500 was put back together it was found that the pressure kept the board in place - not ideal, but a solution!

As this system was starting to grow into a phenomenal size, the time had come to

install all the collected components into a case, and power everything from one power supply. As the CD-ROM was being powered from the PC supply, this seemed the ideal option, as it was small and details were available on Amiga that allowed you to power the Amiga from it. The monitor used a 12V DC supply so that was no problem. I laid out all the parts and work started on converting the PC supply to run all the components together.

All the components were now powered by the PC supply but it was just a mess of circuit boards piled up on the bench. It was time to start on a custom built case which would house all the parts neatly.

CD integration

When the machine was purchased, it came with a Squirrel SCSI interface, and I decided that this would be ideal to run a CD-ROM drive. I connected the Squirrel up to a Sony CDRW6 drive and a standard 500W PC power supply was used to power the drive. The standard Commodore CD-Sysystem was used and it was up and running in minutes. One problem arose, as a result of having the Squirrel hanging out of the PCMCIA port and requiring an extra power supply, the machine wouldn't fit back into its flight case. Since relocating the Squirrel was impossible, I contacted H&B.

They made the suggestion that they could supply me a unit to "fit" into the case that it could be built to suit. This seemed too much of a hassle so the SCSI concept was abandoned. Having seen ADAP software available on Amiga, the concept changed to incorporate an IDE CD-ROM drive.

This seemed a much better idea, as there would be no need for extra interfaces to try and squeeze inside. An 8 speed NEC device was bought very reasonably which led to problems with cables. At the time, connector PCBs were not available to allow 1.5" devices to be connected to the high density connector inside the Amiga. The only option open was an adaptor cable but this was not long enough to reach the drive in the easy case.



4 The Squirrel SCSI interface complicated the entire process. The keyboard had to be raised in order to make some room.

Specifications

800 LCD 150-Step 1000, built in power supply
Apple II+ 20MB, 80000 with 1000 for 1000
1 year 100-1000 drive
CD-ROM drive
Mouse used
Keyboard type not



4 Suzanne became the centre of attention at the World of Amiga show.



Glidepoint fingermouse

The idea was to have a trackball device inside the casing, so there would be no need for carrying an external input device such as a mouse. This turned out not to be. Physically there wasn't enough room to fit in unless the trackball itself was about 1 1/4" in diameter. A spin-off of the adventure in CD Adaptor showed that an item known as a 'Glidepoint' was available. This is the type of input device used on the modern PC notebooks and is extremely small. The 'Glidepoint' required connection to the serial port and replaced the mouse. It was an ideal solution, being no more than 1 1/4" in height. As the Glidepoint is a serial device it meant losing the serial port.



The Am500, the monitor and the power supply were all stripped down to their bare bones so that some initial dimensions could be obtained.

A little juggling around with the locations of some components revealed that it should all fit into an area about the size of the monitor panel. This was advantageous in as much that it kept some aspect ratio to the case, and did not present itself as being out of proportion like some A1200 portables that I have seen. Obviously, it is out of the scope of an article such as this to go into detail about the construction of the case itself, suffice to say that it required some basic sheet metal skills (Simon is being modest here), it required sophisticated sheet metal skills (it) and a few well chosen cutting tools.

Cable capers

Once I'd decided the physical location of the components, most of the leads needed to be extended or modified. The first of these was the hard drive lead. As on all Am500 and A1200 models, the IDE interface is of the high density 44 way type as found in most notebook portables. This is not a problem when connecting hard drives, but CD-ROM drives are only available with the standard density 40 way connection as used on the 5 1/4" drives.

I modified the cable so that it would accept both styles of header. As you can see in the picture, (picture of cable) this was accomplished by cutting the original cable in half. A length of 44 way standard pitch (2.5mm) cable was spliced onto each end of the cable making it longer and enabling the 40 way header to be crimped onto the lead.

of the Am500. It was either that or have no input strokes. Fitted into the small space at the rear of the keyboard, it worked very well indeed.

I would definitely recommend one of these cables to anyone looking for an alternative to a mouse. They are small, easy to use, there's no moving parts and they never need cleaning. They can be awkward to use at first, but once you get used to them, they can't be beaten. Highly recommended.

PC power supply wiring

All these supply rails are available from the motherboard connector.



The cables connecting to the monitor panel had to be extended. I used 6.7mm plain single-core cable and used heat shrink to insulate it. The original nearest video port adaptor was also stripped out of its housing and modified into the lead running to the display panel.

With hindsight, a scandoubler should have been manufactured so that the native PAL modes of the Am500 would have been promoted to 576i. This would have allowed the use of all screen modes rather than having to promote to MULTIGRAM. Productivity. Maybe next time! There were also some controls for screen sensitivity, position and color cycle mounted on the rear of the monitor casing which had to be relocated. These ended up mounted on a piece of veroboard and were made accessible in the side of the new case. The level controls for brightness, invert and contrast were able to be left on the monitor panel, and are nice and accessible in this position.

There was also a small circuit board that was a high voltage generator for the front panel backlight, and it was decided to mount this behind the monitor panel inside the box. A quick test showed that everything was working OK. It proved far more convenient to test at each stage as it happened, rather

You can see the modification in the picture by the two rows of black heat shrink used to insulate the 44 solder joints.

In 40 way strips, pins 40-44 carry the power for the drive, which is normally taken through the four red power connector on 2.5" mechanisms. These four lines were separated away from the rest leaving a stretch of cable 2" long with only 40 lines. The 40 way header was crimped on, leaving the last four to pass through to the 2.5" drive. Connection was made to test the setup, and after installing the software, everything was found to work straight off.

The work behind 505's has to be commented here, as it made the job of installing the CD-ROM so much easier. Ideally speaking, a buffered interface, like those now sold by EynTech, should have been used in the installation of the CD drive but were not available at the time. That said, the connection of the drive straight to the IDE port has proved to be very reliable to date.

The monitor was next and proved to be easier than expected. The monitor has a display card inside that takes the incoming VGA signal and converts it into something the monitor can display. As this was a separate card,



▲ Once here, the PC power supply has been removed from its casing so that it fits snugly in the back of the casing.

than to modify a dozen things than find out something doesn't work.

Insulation factors

Luckily the disk drive cable was long enough, although the power cable needed lengthening. The same technique was used on this test as was used on the others. With a metal casing around all these components, insulation was a prime factor.

Plastic sheet insulation was used extensively throughout the project in order to eliminate any shorts that may have been potentially dangerous, or even fatal. Given the high voltages and currents available to the project, and the metal casing, ground grounding was vital. An earth potential earth point for a lot of electronic products, and designing and insulation was carried out at every available point.

The casing was originally intended to house a 3.5" hard drive, but with the problems encountered by heat dissipation from the powerful supply, the plan was changed. The original 3.5" hard disk was fitted, and the extra space filled up was used to house the cooling fan taken from the power supply. This had the extra benefit of helping to seal down the Apollo card and memory.

I fitted all the pieces together to see any problems that may have arisen up during development. It all seemed to go well and disaster struck. The whole case had been built but the pieces hadn't been measured with the Apollo card in place. Once it had been fitted to the motherboard it was impossible to fit the two halves of the case together with both the Apollo and the keyboard in place. Measurements had to be taken to enable a remedy. The easy solution was to mount the keyboard on rails, which allowed the keyboard down into the case.

This led to it having a nice flush appearance, but didn't allow enough room, so the rails were then modified, and the keyboard right up to the back. This gave just sufficient room to install the Apollo and also gave the keyboard a more, more natural feel as it seemed to lean toward you. That was one problem solved.

Tidying it up

After taking much room left, I decided that separate should have some sound capacity. This was in the form of a small kit available from a high street electronic shop.

Based at 750mV output but for the Amiga sound output, it seems to overdrive to the top of its actually being quite low. The result was fed into two 1.25" moving coil

speakers mounted in the lid just below the monitor panel. An external volume control was also needed as the sound level was just a bit too high to be comfortable, so I mounted a sliding potentiometer onto the hinge of the case just below the monitor panel.

The last job was to take all the recent sockets and relocate them to the rear of the case. These turned out to be straight forward - simply a matter of purchasing sockets and plugs and lengths of ribbon cable to extend the ports far enough. As these headers are not cheap on types, this stage of development was surprisingly quick. One final part was the removal of the onboard mouse port. This had to be removed due to space restrictions, but was later reinstated on a length of multi-core cable and taken out to the back of the machine.

Fabulous Fablon finish

There we have it, all we needed now was to finish the case to make it a little more pleasing to the eye. The original intention was to have a industrial coated but as time became more precious and the Amiga show got nearer, an alternative was imperative.

The final solution was to use black Fablon coating which was out to shops and used to cover the bare metal construction. That just left some labels, which I ran up on a laser printer using PagePro and covered in transparent Fablon to protect them.

► **Conclusion**
This collection of boards and parts assembled neatly into the custom built case.



All in all, the finished item is practical, robust and compact, if a little heavy. As an after thought it may have been possible to have made the power supply on a tray, thus being removable. This could then be replaced to a battery that could be used while out on the move. Once at home, the power supply could be installed and the full power achieved without worry of discharge times. Maybe something to think about as the next one, eh? Finally, no. Success isn't for sale.

Should anyone attempt to use the techniques outlined above, they do so at their own risk. Neither Simon Archer nor DJ Amiga accept any responsibility for any loss, damage or injury caused from undertaking of the procedures detailed here. ■

Simon Archer

Next Month

In next month's **DIY Scene**... **Ami Link!** This is a unique project to drive remote controlled devices and even remote control your Amiga! We're going to great lengths to simplify construction and we'll be providing the small printed circuit board (PCB) on the cover of every issue! Revolutionary or what?

Suppliers

3.5" disk, 400K	Insuline
1 in 1000	IBM
1000	Power Computing
1000	Second Hand
1000	Unit Data
Amiga, cooling, etc	Amiga Resources



Another good month for Amiga games sees the emergence of two potential classics, some timely re-releases from Guildhall and the first game in Vulcan's new Mega Series...



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Screen Scene

OnEscapee

It has a name that no-one understands, graphics everyone drools over, and gameplay that's similar to *Another World*. Everyone's talking about it, but Andrew Korn listens to the guys who know.

When we first saw the screen shots of *OnEscapee* on the *Future/Invisible* website, we were intrigued. Obviously along the lines of the legendary *Flashback* and *Another World* from French software house Delphine. *OnEscapee* looked really rather nice. When we got our hands on a demo and took the thing moving, our jaws dropped. The quality of animation, the effects, the sheer attention to detail signalled that we had a game in our hands that could really stand out, something that could be leading the way rather than following. We asked Alex Gharabeky and Tamas Kocsis of Hungarian developers Invisible just who they think they are turning up out of the blue and doing something that looks so damn good.

"It's a strange story," Alex tells us. "Our team was born when Tamas (my neighbour) and I decided to make a film game. I only knew (BBC) and Tamas, who is the chief graphics man, had never even seen a mouse! We only had an A500, but we liked film and started to develop a vision with two teams of animals fighting each other with bones. Two things stopped us developing it: we realised that using characters from Disney movies is not a wise idea, plus our Amiga couldn't display hardware sprites and an extra wide display at all times."

I don't know if you know the feeling, but it was very hard when we realised we would have to start again. We were desperate to do something, and had just started another game when the A4200 and A4800 came out, and we realised their capabilities and started developing *OnEscapee*.

Until creating *OnEscapee*, there were just the two of us at Invisible. We decided that we must have a musician because our musical skills weren't enough for a professional game, so Lawrence Tok joined. A year ago it



▲ The film falls to its death in one of many spectacular and extremely watchable split screens. We couldn't make meaning that you sit stills and show off skills to watch one more fairly beautiful death...

PC programmer, László Matyázy joined, because many people asked for a PC version. Recently, to speed up work three more people joined: Tibor Mészai, who does the combined elements in the game, Csaba Kármel who helps Tamas with artwork and Mats Lajus with additional PC programming.

That title explained!

The title *OnEscapee* is in fact a compound of the words 'one' and 'escapee'. The hero is an escapee from alien kidnappers. The one is supposed to signify that he is the only escapee, to emphasize the 'one man against the world' theme. Certainly a bit more origi-



nal than *Desires of the Future*, the first working title. Does the game live up to the originality of its name? We asked Invisible what *OnEscapee* had to offer that *Flashback* and *Another World* didn't.

Graphics master Tamas chips in. "Because it uses the AGA chipset, the game can be 256 coloured without decreasing CPU power, so more and bigger animated elements can be included in *OnEscapee*." No one would turn their nose up at *Another World* with better graphics, but surely there must be more! Alex thinks so. "Not just the graphics, the gameplay and the music become better: you can listen to digitised music through all of the game. Several top games are included too, some of which could be separate games. *OnEscapee* runs on standard screens, and can also be played with VGA monitors. We have decided to make a graphics card version of the game after we finish with the AGA."

What are they most proud of in *OnEscapee*? Tamas has a quick answer. "First of all I am proud of Alex' work. He has made an excellent background composer, and a new full-screen, peaked animation for

It looks nice to be Another World but Delphine's offering never had all these fancy effects. The split-screen feature was great, but one of many cool visual effects.





▲ One of the scenes you'll see as you try to help the hero escape from his captors. There is a lot to see from these villages in Romania like cities and high-tech houses.

▲ If you like the scenery, wait until you see these scenes. These scenes, like this, will show you the world of the game. If there is so much to do as there is to see, we are in for a treat.

not with which we can insert sound effects from by hand to make my work easier. Specifically, the fourth level is the one I am most pleased with. It is set on the streets and it is the biggest about 100 screens, the hardest, the most...

Arrigas in Eastern Europe

OnEscapes has a distinctly cyberpunk, air to it. The main character - known only as The Hero - is on the run from powerful alien beings. There is a mood of claustrophobic oppression in it reminiscent of other Eastern European dystopian fiction.

We've started to hear a lot more from developers in Eastern European countries, and it is interesting to see the different personalities of creators from those countries. We asked Akos about the Arriga scene in Hungary. "We haven't paid attention to the scene before, and we're sorry now to the scene in Hungary is great, and very helpful. There are many Arriga (PC) characters, making lots and more than the game. There are famous demo groups too such as Faculty, Therapy, Impact, Entry, C.O.I, Prime 18, and the Power Team."

As asked what they see in the Arriga, Tamas says, "While working on OnEscapes, I have done some graphics for other companies on a dual Pentium 133 system. It is very fast but I had a lot of problems with the OS. I came to realize that the Arriga is much bet-

ter. I don't like to work without the advantages of the Arriga, for developing graphics for a game like ours it is better."

OnEscapes is due for a release later this year from Redwood Software, a company better known for

making CD-ROMs noted for a high level of presentation. OnEscapes is their second outing, the first being the Sisters Inspired Foundation. There is an interesting similarity to the two games Redwood have picked up, both being the sort of game where the Arriga's hardware is suited to. Following the trend for garish shades. In linear misadventures, these are games that Arriga can do every bit as well as any other machine out there. With titles like these, the development team's creativity comes to the fore, rather than programming ability - however impressive, it remains to be seen if OnEscapes can be a success. There have been a shortage of games for the Arriga of late, and even more of a shortage of Arriga games that could make games players on other platforms sit up and take notice. Could OnEscapes be the first wave of a revival of fortune for the Arriga? The scene with Akos' own words on the matter. "A lot of people say the Arriga is dying. It's strange, they said that years ago and the Arriga is still going, isn't it? Because we keep it alive, with our interest, work, and love. So it depends on us too, whether there will be great games or not!" ■

▲ The example of the original design artwork used in the production of OnEscapes.



The Shadow of the Third Moon

■ **DFR:** September ■ **Developer:** Black Blade ■ **Publisher:** Titan / Bittersoft ☎ 01908 261466

Italy has been associated with Renaissance art. Black Blade design, the Italian video-game house responsible for TaitoTM, clearly want to take on the role of the Leonardo of the Amiga games Renaissance. Leonardo at any rate, as Black Blade design is headed by the irrepressible Francesco Leonardo, who takes up their Taito landscape routine like it was something really special. Fortunately it is.

Real engine games have been around for a while now. They offer a reasonably fast way of providing a kind of 3D pixel-based landscape, ideal for flight simulators. Taito, in Black Blade's version, on the Atari notion, as pioneered by Neovision for the VoxelSpace 3D system used in Comanche on the PC. If you've seen this game or any of its descendants you'll have a fairly solid notion of what to expect. What you won't be expecting is how fast and smooth this system is.

Make no mistake, this engine is significantly smoother than anything Comanche had to



offer, and gives similarly matching CPU power, it wipes the floor with it on speed.

TaitoTM really requires an X286 and a CD-ROM drive, but gives it what it wants and more to be granted. Check out those screen shots, the ones of the nice Vista-like landscapes. No, they're not the into sequels, those are the in-game graphics. Plus they'll run at 12-13 frames per second on the kind of accelerators which costs less than a hundred pounds. That'll be just pretty when it comes to the ground beneath your wings. The various vehicles you will either fly or fight are



▲ **These landscapes mean! You, that's right, this isn't the late sequels, this is the game itself. You need extra bits with Taito.**

good looking 3D objects which manage to look right for the environment, which is a try in this type of 3D landscape.

Coupled with glossy high res rendered into screens and some specially written music spliced from CD this is a feast for the senses. You have a good range of missions to fly taking in an environment of campaign and some widely differing landscape types. Action is fast and fluid, and from what we've seen fun to play.

Prepare for major jaw dropping antics. **Andrew Koon**



Street Racer

■ **DFR:** September ■ **Developer:** UbiSoft ■ **Publisher:** Goldhill / Epic ☎ 01773 836781

UbiSoft, the French development team behind a number of Amiga titles in years past, are having a final fling on the Amiga with this truly weird race. Released some months ago on the PlayStation and PC to not a little acclaim, and rather earlier on the SNES, this is the most mainstream title to hit the Amiga in a long time.

Street Racer on the Amiga gives nothing away to versions on the other platforms. The sprites seem slightly smaller than on other versions, but are impressively detailed and beautifully designed. The courses are pretty simple flat affairs, with none of this hair-fangled hills and valleys stuff, but the graphics are all that much prettier for it and the whole thing tips along at a breakneck pace.

Street Racer is a racing game written by people from another planet. An obvious inspiration is the brilliant Mario Kart, the game that made the SNES worth while. UbiSoft, authors of previous Mario Kart, like KTX, UbiSoft clearly think that



▲ **Racing games, eh? Don't they look...**

Mario Kart is looking in the humorous wilderness department, because they have taken it to a whole new level. The main thing you'll pick up on is that the guys who drive these cars around seem to think absolutely nothing of reaching a hand out and giving one of the competing drivers a swift and meanie slap in the face.

There are options aplenty to keep you amused if simply racing about isn't enough for you. There are various championship and



race options, and there is also the humble option that allows you to take off the gloves and get really violent - there's even a soccer option. The game supports up to four players and promises serious multi-player laughs.

This bizarre Street Racer Mario Kart crossover should be ready for the price over next month. Don't miss it! **Andrew Koon**

▲ **...and if you can get into fights with competitors in soccer mode, well, that is a pretty good option too!**

Gunship 2000

■ Price: £7.99 ■ Publisher: Epic Marketing ☎ 01382 850000



Now this is what I call a flight simulator. None of your long distance weapons and targeting lingo, just plain old close-up dogfighting – with modern weaponry, of course. The original Gunship still has to be one of my favourite games ever and I can't remember how many days I lost playing it as my trusty old Commodore 64. There have been many different helicopter simulators since then, but somehow they haven't been one with the same level of involvement or excitement as Gunship. This is, of course, until the release of Gunship 2000.

Originally designed for PCs, somehow those bobbies at Microprose managed to make it run as fast as ever on the Amiga, so everyone could enjoy this stunning flight simulator – quite a feat on an unimproved 4000. As with the original, the game is based upon the AH-64 Apache gunship, one of the most powerful fighting machines in the world. Like most Microprose games, you are located in a large area with a finite number of targets.

The game engine creates a series of missions by randomly selecting pairs of targets for you. These are no campaigns as such,



more of a continuous missile firing party.

One thing this game did do was to show the world that not all simulators had to be flat and boring. Gunship 2000 featured the most dynamic terrain of its time, with realistic hills and valleys (just right for low level flying), then popping over the top to take out a few tanks, the most believable action seen in a flight sim – you really did feel like you were flying the thing, and thanks to the random mission generator, the most varied missions were yet.

One minute you were photographing an enemy installation, the next you were bomb-



ing a truck convoy.

Has it lost any of its appeal a couple of years down the line? No, this is still as exciting as when it was released.

OK, it may not have flashy textures mapping like TFX, but it's certainly

guaranteed to keep you up every night, from now until Christmas. ■

Tony Dillon

▲ It's got guns, but it's not a ship. Gunship 2000 is about helicopters, but we can forgive it 'cos it's great.

Editor: 85% Best: 85% Usability: 85% Popularity: 85%

● Recommended version	Any
● Number of files	4
● Size	1.1MB
● How often available	Yes

90%

Railroad Tycoon

■ Price: £7.99 ■ Publisher: Epic Marketing ☎ 01382 850000



OK, apart from the people who created 'Southern Belle' for the ZX Spectrum, who would have thought that a game about trains that didn't involve running along one wheezing at things, would be such a major success? That incredible old 2nd Model, that's who. Once again, the look is relatively simple concept – that of the train set – and then added a whole new layer by mixing it in with Sim City. Well, instant classic.

To explain, you are in charge of a railroad company, and like all these games you start with next to nothing, and your aim is to build it all up into something gigantic. You have at your disposal some workers, a little money, and a small plot of land. From this you need to build stations in the places where people

are most likely to be, put more stations at places where people are most likely to want to go to, and then lay the track between them. The miles you select greatly affect the cost of building and the cost of running the service, which is all subsidised by passenger fares and other services such as mail trains. You have a huge map to cover, so you must plan wisely if you're ever going to set up that InterCity network you always wanted – one with more than three smoking seats and not quite so many screaming children.

The interface is friendly, and building things simply a matter of pointing and click-

▼ Oh they call you gotta lay 'em. Gotta draw, but when you see the world's best games.



Abysmal installers

Railroad Tycoon and Civ have awful HD installers. Copy everything to the place you want it and install the files in your fonts; oh. Check the names of the floppies (don't assume they're similar) and assign those names to where you installed the game. This lets Railroad Tycoon run on A4000s too, something it otherwise won't do.

ing, but it takes time to master – it's a fiendish strategy game, and you'll need a business head to stand a chance to win.

All that's left to say is that it's still an incredible title. This kind of game doesn't age – the challenge is still as fresh now as it always was. If you don't have it yet, what are you waiting for? ■

Tony Dillon

Editor: 85% Best: 85% Usability: 85% Popularity: 85%

● Recommended version	Any
● Number of files	4
● Size	1.1MB
● How often available	Yes

90%

Our Daily Gutter

Western Gold Striker
New Lords Uncovered!
Prosperity in 1840!



The Strangers

■ Price: £24.95 ■ Publisher: Vulcan Software ☎ 01705 670 260

Finding life a bit too safe and cosy? What you need is a bit of brutal street violence with guns, blood, decapitation sequences and a multi-player option.

AGA



Like the gaming world goes easy over the likes of Soul Blade, Tekken and Street Fighter EX, resplendent in their texture mapped polygon wonder, back at the ranch, Vulcan continue to uphold the affairs of the Arma games scene with Strangers AGA. It's got violence, fancy 3D wire animation and more options than you can keep track of... but is that enough?

Strangers AGA is a CD only game. The artists will have realised it's for AGA Armares too. Following the current trend, it's been snipped up from the flourishing European Arma development scene by Vulcan for their Mega Series range of CD only games. Adams Entertainment from Slovakia are the team behind the game, and from the outset you can tell the effort they've put into it.

Post-nuclear landscape

After a couple of neat animated logos, a lame glimpse at what looks like rock star 'Roxstar' fades up, followed by a narrated introduction to the post-nuclear style world where the game is set. If you select English as the language (there's an impressive list of ten to choose from) you actually get the spoken introduction spooled off the CD. It's a bit cheesy and predictable, but let's not

► Shades of substance creep into the game in one of the grey locations filled out by the boss.



look a gimmick, sorry I meant a gift horse, in the mouth.

Moving swiftly on with a tap of the spacebar, an impressive animation of data core relevance acts as a bridge to introduce the plot of the game, in which a car is chased through some streets and a tunnel, before the closing caption 'Once again, the head of the Mafia escapes from the hands of justice'. The animation is quite lengthy and as it's displayed direct from the CD, you'll need a 1x CD drive to watch it at full speed - played on an expanded CD-ROM it powers every five seconds.

Suit with me? Good. To re-cap the basic plan, there's this Mafia boss who needs scoring cash, and you're the man for the job. You and who's army? You might well ask. Actually, you and 'your' army if you've got enough friends to draw upon. While on the

surface, this looks like a substandard Paragame clone (we'll come to that, don't it does actually have some neat twists, not least the option to have up to eight human players taking part at once). Vulcan can help you with a multi-way joystick adaptor, or you can squeeze in on the keyboard. That's not to say you can't play it alone though.

There are actually four main gameplay modes to choose from: Action, Deathmatch, Gang War and Practice. Action mode is your basic 'load up the gang to move onto the next level' type of thing. Deathmatch allows you to select any of its 24 characters and then slog it out in a free for all with no computer controlled enemies.

Gang War is like the Deathmatch, but you can team up with other human players to form two gangs of three, three of two or whatever you like.



The usual suspects

There's an impressive number of characters to choose from (not that it seems to make much difference who you control). In the interests of sexual equality, there's the usual sprinkling of female fighters too. Have you noticed how they all have a striking resemblance to those Italian chaps?





Two-dimensional

Despite the earlier references to the likes of *Taken* and co., you can see from the screen shots this is not really in the same league. While gamers by have commented on its likeness to *Streets of Rage*, it can't help seeing the similarities with that seminal gang war beat 'em up *Renegade*.

Like *Renegade*, *Strangers* is a series of horizontally scrolling "stages" in the form of various shifty locations around the aforementioned post-apocalyptic city. Most two screens in width, they scroll with the player as they move one way then the other. Although you can walk up and down the screen as well as side to side, it's still and truly two dimensional. That's to be expected of course, and no bad thing in itself. The trouble is, it's not just the graphics that are flat - the gameplay is too.

Before long the process of beating up our opponents becomes all too mundane. For a start, some of the moves are particu-

larly exciting with your basic punches, kicks and the odd sweeping move. If the level boss notices you're close to death, he'll put you out of your misery with one of the "finalities" by showing you are off, then your head. If you don't want this level of gore there's a "parent lock" password, used to enable or disable the fatalities. There's also weapons to pick up, but these offer little distraction from the punching monotony. Things improve as more human players join in the brawl, but still the shallow action does little to get the blood boiling.

Strip away the fancy rendered intro screens and sequences, and you're left with a game that's desperately trying to improve on its simplistic origins. The huge variety of characters, gameplay variations and options do make a difference. In fact they will be enough to save the game in the eyes of some. But let's be frank. The gameplay really is like something from a mid-80s time capsule. That could be acceptable in some games but beat 'em ups have come a long way since then.

It's clear that big efforts have been made, but at the end of the day they are all in vain. If that same amount of effort had been put into developing the core gameplay I'm sure things would have been different. Bigger sprites, faster action, more intelligent enemies, tougher sound and professional looking graphics should have been at the top of the list. This is a shame, as the Amiga has never been well catered for when it comes to beat 'em ups. Anyone working on similar projects would do well to take a look at the classic 16 - and the Amiga convention of *Mortal Kombat* to see how speed, graphics, sound and balanced gameplay can be combined to good effect. ■

Tony Hoogen



Introducing... a car chase

Whatever you think of the in-game graphics, the rendered 3D car chase intro sequence is pretty impressive. While it starts looking like a couple of big cars running around a cardboard set, it soon gets more convincing with some dramatic camera motion-blurred camera panning. It all ends in the satisfyingly predictable crash. What a shame it's got nothing to do with the game itself.



▼ Hoogen
such as cars,
more and
expanding lo-
cals can make
the job easier



THE STRANGERS AGA

● Retention of series	— 3.4	Amiga	87%
● Number of titles	— 43	Amiga	90%
● ROM	256 Kbytes	Amiga	87%
● Best deal available	— 100	Amiga	80%

VERDICT
Lots of fancy shooting around a basic beat 'em up.

60%

Tips Central



CU Amiga's wacky arcade opus is just about ripe for some tips from Mark Forbes... whilst over on the other page the dungeon master Tony Gill does some more of his expert adventure solving for us.

Dune 2

Mis 1 South from Hull has a side tip to go for Dune 2 buffs. First destroy the enemy construction yard or yards so they can't rebuild again once you have found them, and once you've practically destroyed everything leave either a spice storage silo or a solar outpost standing. If there's a lot of space left you can collect the whole lot. All those credits will be yours and you gain a better score and rank, by it... it always works for me.

Xtreme Racing

On the first selection screen type the following:

SECRET ENERGY - use a sheep to race with!

TURBO MYSTER HATMAN - make fast car!

ENERGY - auto qualify for any race and access the 3 bonus tracks in single race mode.

Hints for 3 bonus tracks:

Roundabout 1 - Go to the left of the two traffic islands, and go straight on (pick up the turbo boost) until you can see a gap in the wall

with a tree in it. Drive through the tree and reverse onto the course on the other side. Go straight-out. Useful too.

Roundabout 2 - There is a road through the middle of the second island (the one before the main Start/Finish grid), as you have to go through a tree again!

Road Climbs 1 - At approximately two thirds of the way along the very first long

straight, you can actually drive through the tyre wall and then onto the second long straight!



Theme Park

Melvin Campbell came across a supreme tip for those who don't like cheating (oops, I've never heard of such a thing!). When you come across the situation of having very little money (that sounds familiar!), but you also have a fairly large park then try doing the following:

1. Close the park.
2. Cut off all pathways to the rides.
3. Take out a loan, if it is necessary.

4. Place shops around the entrance and put up the prices.
5. Open the park and wait.

Now people will flood in very happily, and will buy everything they can get their hands on! Meanwhile you can be preparing the rest of the park for reopening.

You can easily get half a million in a couple of years from the gate takings, shop takings and the end of your loans as a result of all those happy little people.



Colonisation

It's all gone strategy crazy with this month's best Colonisation is one of my favourite strategy games of all time, so I was pleased to get hold of this cunning cheat which virtually gives you a licence to print cash! Here's what to do...

When starting a new colony name it 'Charlote' (well doesn't everyone call their colonies by girl's names?) This allows you to see all the maps instantly, see other European ports, check on other countries (charlote), and it also gives you \$50,000!

When you access the other countries' European ports you can spend all their money! You can do this by either recruiting lots of people, or you can buy anything! Or if you start again and rename your colony to something else you can start another colony called 'Charlote' and get yourself another \$50,000.

For example, if you start a colony and get \$50,000 and then abandon the game several times, you will eventually start the game with \$50,000!

Sim City 2000

Start a new game, in any year of the third level, type FUNK until your cash reaches \$50,000 and reply yes to all queries!

Now you go to the budget menu and select bond placements. Click on reply bond and answer yes to reply bond at 1%.

You will now receive \$50,000 every year!

Try typing in the following reply codes for some amusing effects: **JOKE**, **YESS**, **CRAB**, **PIZZA**, **TONG**, **SHIT**.

You need help

If you would like some help on any game - or you have some tips that you'd like to share with your fellow readers - then please write to us at Tips Central at the following address, remembering to mail your envelope Adventure or Arcade accordingly:

Tips Central,
CU Amiga Magazine,
17-19 Millbrook, Isle of Dogs,
London E14 9TE.

Adventure helpline

Police Quest II

I have been playing Police Quest II for ages. I am completely stuck as I don't know how to get into my locker or my Captain's locker, how and where to get the gun, how to gain access to the computer and what the passwords on the Captain's desk mean. Please give me some help as this is my favorite Sierra game. Nick.

I love it when people tell me about their favorite game, and then reveal that they haven't got a clue about it and have been stuck on screen for as years. You must have some pretty rotten other games.

The passwords are used for the computer of course, and this is what you do. Walk to computer, see computer, turn on computer. Access personnel file (password is plaintext). Look at Lloyd Pratt and Kaiser's files and note the information about their problems. Access the Homicide file (password is innocent). Access the Vice file (password is Miami).

You'll find the combination for your locker written on the back of a business card which is in the glove compartment of your car. The combination is 36-4-12. If you want a laugh, try mixing the numbers inside your locker.

Simon the Sorcerer

I am well and truly stuck on Simon the Sorcerer. I have managed to get past the castle outside the Tower of Doom, but what continues to really puzzle me is how will I get past the frog on the other side of the pond.

I have tried using the stones against him, but he keeps on going.



Simon the Sorcerer



Flight of the Amazon Queen

ling me and then spiting me out.

Crab License, Almatyk.

Nasty things frogs. I had some frog legs for lunch last week, and they were so fresh they kept kicking the piss off my plate.

If you look in the water at the edge of the pond you can find a tadpole. I know it's there, so look very carefully, as it is easy to miss it. Once you have the tadpole you should talk to the frog and tell him to 'froggle' or else the tadpole will get it.

Flight of the Amazon Queen

I need to know how to get past the snake in the Snake Room. I have the monkey's hand and the wrappings, but when I try to put them together the game keeps saying 'it's off'. I need to know how to turn it on.

Lee Fox, Reading.

The idea of getting the wrappings and the arm brace together is to form a torch which you can

then light and scare the snake away. Obviously, until you light the torch it will be 'off'.

The trick is how to turn it on. For this you'll need to ignite the lighter using the flint, then use the lighter to light the torch. If you haven't got a flint, and it's not the sort of thing that most people carry around with them these days, then go back to the huge statue and walk into its mouth. Go, via the pulley room, to the room at the top. Use the pick axe to open a hole on the right, then use it again to break the statue's on the right. It is here that you'll find the flint.

KGB

I have climbed onboard the Victor Mavrov boat and tried to find anything that I can pick up, but there's nothing. I have also hidden in various places, but get caught every time. Can you please help before I go completely mad.

Super-Gee, Bradford.

You say there is nothing to pick up. Maybe you are just too clumsy. I know that when I've been out on a Saturday night and decided that there really isn't anything worth picking up, a few plots of tape usually does the trick. I suggest you hide behind the fish



Monkey Island 2

order and wait until the meachan is turns up and then leaves. Now you'll be able to climb down into the Radio Room. Here you will then be able to add all of the items to your inventory which is under the bed. Back on deck you must throw the bottle overboard (just left of the lifeboat). The meachan will die in after it, allowing you to get down into the engine compartment and hide in the closet.

Eventually the meachan will return and fall fast asleep. Use the belt with the engine, then go back into hiding until 9:30. At this point head for the bow and wait behind the fish crates until midnight. Follow anyone who appears and goes to the Radio Shack, so that you can listen at the door of the Reception Room. Return to your hiding place and stay until 5:30. When everyone has left you can walk to the stern at 6:45. At 7:30 you'll reach port.

The Secret of Monkey Island

I have been playing this game for years, and I don't want to give up on it, but I really need some help. I have reached Monkey Island, but I haven't a clue what to do or where to go. Can you help?

Bob Harris, Norfolk.

When you arrive on the island you'll be nicely placed to pick up a banana. Walk to the hut on the NW of the island and pick up the rope and the apples. Push the cannon and pick up the cannon ball and gunpowder. Go to the river fork (east of island) and pick up the rock (which is really a flint). Now use the gunpowder on the dam and use the flint on the cannon ball.

Now you're faced the dry river bed and pond with water. Then go to the pond where there's a cooper you couldn't reach before. Pick up a piece of rope. With two pieces of rope you can go to the creek near the landing beach and use them to climb to the bottom to find a set of cans. Walk to the piece of primitive art and pull it twice to move it. Climb to the cliff above and push a rock off the ledge. And now you'll be able to collect the bunch of bananas which you badly need.



Ho hum, another month another collection of new products to pump through the CU Amiga labs. If only the Amiga market would settle down, we'd get some peace.

50 Fusion Mac Emulator

Jim Drew's latest commercial Macintosh emulator gets a thorough examination by Matt Bertinucci. Is Fusion a ShapeShifter heater?

52 Eyetech E-Z Tower

Andrew Karm checks out Eyetech's new A1200 tower kit. A table of A200 tower systems is provided for handy comparisons.

54 Storm C v2.0

The latest version of the Storm C compiler gets a workout from CU Amiga's code guru, Jason Maloney.

58 Apollo 1260/66

The latest Amiga 68000 accelerator on the planet examined. We also look at overclocking the latest batch of 68000 CPUs.

59 p.OS Pre-release

ProDOS's AmigaOS clone operating system is shaping up nicely. Does Andrew Karm think this a worthy successor to AmigaOS?

61 Internet News Readers

NewsPro 1.0 and ProNews 2.0 are compared head-to-head to see which Usenet news reader comes up tops.

62 Modems

The latest and fastest Supra 68K modem and the Zport OneNet 1600 internal adaptor find themselves under Matt Bertinucci's gaze.

64 PD Scene

Top PD entertainment this month courtesy of Charley Cat, the stunning Captured Dreams demos and a rather familiar looking voxel flight sim.

66 PD Utilities

Duplides and directory tools are the big thing this month, but for more variety there's also our regular dose of the Amiga round-up.

70 CD-ROM Scene

Another juicy collection of CD-ROMs including a rather superior Italian CD, a disc for the Jurassic Park DFFer and the latest Amiga set.

72 Art Gallery

How computer art from our talented readers worldwide. From photo-realism to moodily hand-drawn work, it's all here.



TechScene

Fusion

■ £49.99 ■ Developer: Microcode Solutions ■ Supplier: Bittersoft ☎ 01908 261466 <http://www.bittersoft.com>

Fusion is the latest commercial Macintosh emulator from Jim Drew's Microcode Solutions stable. Mat Bettinson asks if it shapes up against ShapeShifter.

Macintosh emulation has always been a complex and difficult endeavour. However when you need to run some of the big industry standard applications, Mac emulation is just the shot. Actual Macintosh-like performance is easily possible unlike PC emulation which is hardly feasible to do anything serious with. If you're a serious user spec Amiga, it's also good for playing some of the big name games on the Mac that may never make it to the Amiga.

Fusion vs ShapeShifter

Whatever the reason for emulating a Macintosh, Christian Bauer's ShapeShifter is the Amiga's default standard Macintosh emulator. ShapeShifter hasn't been developed a great deal in recent times and there remains a number of features and improvements that can be made. Fusion claims to be just this, a ShapeShifter killer.

The big improvements include virtual memory support, direct display drivers and all round performance gains. Fusion is a 100% commercial package as you won't

have the ability to try it out unless ShapeShifter's shareware policy. Supplied on a single floppy disk, the installer copies everything needed to the hard drive and installs the 'servosim' command to the start-up sequence. This was the start of my problems, servosim caused my Moravia 41200 tower with a G4000 1200 to spin into a constant reset loop.

I booted with no start-up sequence, removed it and started to read the documentation provided in Amiga-Guide form only. It was quickly apparent that there was no documentation on servosim or the other file provided called runosid. Some form of patch is always required with Macintosh emulation to fix the bottom area of memory. The OS PrepareEmul worked fine for OS but Fusion refused to acknowledge the patch. Though certain degrees of experimentation I found that runosid needed to be in the start-up sequence instead.

Fusion's GUI sets up all aspects of the emulation and there's quite a bit of it too. The first page lets you select the memory used for the emulation. Every type of mem-



▲ When Fusion is running, this control panel is active.



▲ Here's the EP settings which allows us to mount any Mac volume on the Amiga.

ry is listed verbosely, impressive but the free and used memory gauges often lost the plot and flew up and down with a couple of mouse clicks. On the same page is the memory options and here one can activate the really glibbery function of Fusion, the hMUL options, to allow virtual memory on the Mac side. Of course one will need a CPU with an hMUL to take advantage of this aspect. A 68000 or 680200 will not do.

Video drivers

On the video page Fusion displays a list of drivers; clicking on one brings it to the selected listview. Clicking on it on the selected side activates the options. Fusion uses this silly GUI method on a few pages but it's possible to get through. I'd be happier with a more standard GUI approach though and some online help!

The display drivers are excellent, there's native Amiga drivers, CyberGraphic, A200 Graphics and PicassoIII, all with refresh mode drivers and direct to the display drivers called 'DL'. The latter is very welcome as it offers great speed boost over ShapeShifter. The implementation of QuickDraw acceleration through to the RTG systems and into display speed greatly.

Unlike ShapeShifter which sets the screenmode to start the emulation in, Fusion actually tips the display mode available from the display driver in question and sets this in the Mac side. The Macintosh standard monitor control panel will then allow changing of screenmodes on the fly rather than a reboot. Another powerful and welcome feature. By plugging in a high density floppy disk, I managed to start Fusion the 'official' way. This was done by defining a hard file (more later) and booting the real MacOS System 7.5 floppies: first the DiskTools floppy to format my hard file, then the 7.5 installer for a painstakingly slow process of installing System 7.5. After the entire installation procedure had finished, I booted out with the generic Macintosh

▼ Here in ShapeShifter, you'll see the Amiga-Guide, and in the Amiga-Guide, you'll see the Amiga-Guide.



Truly Undescriptive Error". After several more attempts, showing progressively less to install, it never worked and I gave up.

The obvious question about Fusion is "How can I use ShapeShifter partitions under hard files with Fusion?" The answer is "No" but you wouldn't know it from the documentation which fails to mention a lot but, not unfortunately, fails to mention using ShapeShifter legacies at all. After a call to BitSquid, it transpires that there is a roundabout way of doing this. For a hard file, one must create a Fusion hard file of the same size as the ShapeShifter hard file. Then delete the Fusion hard file and rename your ShapeShifter to that of Fusion's.

Why on earth can't you just select an existing hard file? The authors' claim is that it is better to start from scratch, but after lots of experimenting, it's clear that Fusion is much more fussy when it comes to making MacOS.

Mounting 55 partitions

Using a ShapeShifter partition is possible in a shockingly less painful way.

The original AmigaDOS insurance policy for the partition needs to be mounted and then Fusion can access it from its devices page - the same process for creating a new Fusion Mac partition. It would appear that the partition must remain mounted unless 55 where it is typical to dismount the partition from the hard drives, 55 settings.

Fusion has standard support for ports, the Mac Port A and Port B can be pointed to the serial or parallel devices. A quick test verified that this worked fine. Unfortunately the network driver didn't function at all. After adding the alpha device SAM82 driver, the file failed to recognise the presence of Ethernet at all and disabled the EtherTalk networking. This was a major blow for use of Fusion in the office. BitSquid and the authors had no suggestion on why it should not work.

ROM image files. Fusion recommends standard STX ROMs even if using an S40. Apparently Jim Drew has performed some miracles of patching the ROMs to work on S40 and O40s which work better than Apple's own patched 1Mb ROMs. Like ShapeShifter a utility is provided to dump the ROM image off a real Macintosh. I used the same "lib" Quadra 800 ROM image used for ShapeShifter with no problems.

Fusion has support for the A40 audio mixing system which means that real 16-bit audio can be output from the Mac side directly to any supported A40 sound card or over the Amiga's native sound via an A40 Wave driver. This is excellent and future proof audio support.

SCSI strange approach

Unlike ShapeShifter, Fusion does strange things with supporting CD-ROMs and standard SCSI. It will allow a CD-ROM to be selected by device driver and unit number but for proper native Mac SCSI access to devices, one must use the Emprint card with the SCSI interface or create an AmigaDOS mountpoint for a device. BitSquid informed us that proper native Mac SCSI support is coming in Fusion 1.2. I certainly couldn't get a Zip drive up and running but it took seconds with ShapeShifter.

Fusion has superb input handling for the mouse and keyboard. There's a choice of using low level hardware mouse handling or software handling which enables the use of non standard controlling devices such as graphics tablets and such forth. There's also basic support for the US keyboard and the International "ISO" keyboard.

There's the ability to set the Mac being emulated via a cycle gadget. This doesn't mean anything other than setting an ID for MacOS but some programs will depend on it from better experience of ShapeShifter's fixed Mac ID emulation. In all, the Fusion hard



▲ This bit of intense Mac emulation easily beats out Fusion's performance because of direct access.

and GUI is functional but a little kludged. Fusion can also be launched from the command line. Interestingly whenever Fusion is run, it says "Type: Fusion -h for usage instructions" but the -h (or help) mode does nothing. It's a great shame that the front and GUI doesn't have help buttons which pull up the AmigaGuide to the relevant location or at any button to bring up the AmigaGuide documentation at all.

One cool Fusion feature is that when flicking back to BitSquid, there's a window there that controls the Fusion emulation. The greatest function here must surely be the ICD handler. This allows any volume on the Mac side to be mounted on the Amiga. It's something like the Mac handler on ShapeShifter but via a GUI and without having to mess with filetypes and mounting orders to select a drive. It's a massive improvement on the ShapeShifter method. Fusion also allows clipboard movement of text from Amiga to Mac and vice versa.



Emulation control panel

It's possible to force the emulation with a button on this little emulation control panel for doing so is a bad plan. In fact I found shutting down the emulation at all was it achieved unless you intend to reboot. Otherwise a variety of bad behavior from hangs, Fusion task fields, crashes and so on resulted. The author's blame using of a ShapeShifter hardfile but this behaviour was evident even on a fresh Fusion hardfile.

Concluding, I found Fusion a very difficult product to review. Macintosh emulation can be relatively easy on one setup and then not at all on another. This doesn't explain the collection of difficulties experienced here. Much of my problems really could have been addressed with much improved documentation not to mention online help for the GUI. The lack of network support functioning and crashes on quitting are just plain bugs that need to be fixed. Luckily it seems that some of these aspects are going to be addressed in version 1.2 including the essential Amiga SCSI support.

While Fusion is certainly more developed than ShapeShifter with impressive features and performance gains, it still seems an unfinished product. If these criticisms were addressed there's nothing holding Fusion back from sweeping up the Mac emulation throne. I recommend Fusion if you're willing to wade through the hassles and complexity if Mac gaming is on your mind. The raw video performance makes 3D games such as Duke Nukem 3D far more impressive. However, for the Mac emulation newbie, I can't give it the resounding thumbs up. First try using ShapeShifter before getting your wallet out, it's much easier to get up and running. Fusion is a good step forwards but it needs some more polish yet. ■

Mat Bertelson

FUSION Developer: Microcode Solutions

System Requirements: 68010 bit memory card, 100Kb free RAM and system disk, 680 display recommended

Ease of use	40%
Performance	10%
Value for money	40%

At just £10 a box it's not too high, you'll need more.

Verdict:
Fast, powerful but flawed Mac emulation.

78

▲ The main Fusion control GUI. Once here is the page with the drive drivers listed.

Mk II EZ-Tower

■ Price: £119.95 ■ Supplier: Eyetech Group Ltd
 ☎ 01642 713 185 <http://www.eyetech.co.uk/~eyetech>

Eyetech hits the scene with an offering which makes the word 'tower' more verb than noun... this beast is vast. What's more, you barely need to take your Amiga apart.

The EZ-Tower is a rather interesting alternative to the ICS and Micronik towers reviewed last month. It is designed with the home build market very much in mind, and is aimed squarely at the kind of people who are much more at home with a hot iron and hand drill than they are with a soldering iron.

The biggest difference between this tower and the ones we have looked at previously is that the motherboard doesn't come out of the case. You remove the top of your A1000 and the keyboard, but the motherboard, metal shield, and the bottom of the plastic case all stay together. There is a large slot in the back of the tower into which the A1000 fits, after a couple of small latching/holding notches are cut into it, and a small metal retaining plate is screwed over the top to hold the A1000 in place. The computer remains loose at the front, but a curved metal strip towards the front of the case lets you fasten it with cable ties.

An interesting departure from the norm sees the motherboard being mounted the opposite way around than traditional towers, some-

thing only possible because of the unique nature of the particular tower used.

This is advantageous to PCMCIA users as it means they don't have to buy an expensive and fragile angle converter. What's more the tower has a cut out at the back designed to take a cable which converts the inconvenient 50 way Centronics interface on a Squirrel to a more convenient 28 pin D-type connector plate for the back, and a 50 way IDC connector for internal SCSI devices. If you have an external SCSI CD-ROM drive, you can move the drive mechanism into your tower, and you should find a cable of this type in the old external case. Alternatively Eyetech can supply them for just under £20. The down side of the unusual alignment is twofold.

Firstly, accelerator cards are left dangling by the slot. The manual does suggest that you might want to wedge your accelerator in place. We strongly urge anyone to follow this advice. The second downside is that the motherboard faces into the case, making further modifications a bit of a pain. If you want to fiddle about the insides once you've constructed it, this is no problem, but if you are a beginner it will induce

A lot of thought

A similar amount of thought has gone into the design of the rest of the tower. A very nice touch is the CDSP phone output option. Rather than just sticking a couple of phone jacks on the back and letting people deal with having two sound outputs for themselves, Eyetech supply a simple passive mixer stage to mix the CD audio and Amiga audio outputs.

Eyetech supply the EZ-Key keyboard adaptor, the second unit to install and about par for the course for reliability. Alternatives are the Mac interface and the Micronik adaptor. You're likely to want an extension to the ICS interface too. Eyetech sell an expensive but good buffered device which gives you two channels, allowing up to four IDE devices to be connected.

The solution to the floppy mounting problem that Eyetech offer is the EZ-DFL, an interface which allows standard PC drives to be connected as a standard DO



DFD. They are currently trying this at £30.95, including the drive, which seems like an expensive way to go. We feel that with both the ICS and Micronik towers allowing you to retain your old floppy, this is a point against. However, Eyetech have assured us that they

Zorro Solutions?

The Micronik busboard which we looked at in last month's reviews of the Micronik and ICS towers cannot be used in the Eyetech tower - the 'upside-down' mounting makes this impossible. Instead Eyetech use the RIM busboard as used in the Eagle tower systems. Eyetech did not supply the EZ-towers with one, so we have not had a chance to try one out. In operation there should be little difference between them, and Eyetech tell us that the old reliability problems the RIM board suffered in the past have been solved.



will be supplying a face plate and cable for connecting your internal drive as standard by the time you are reading this.

A clever touch is the connection of the LEDs to the LED header on the motherboard. A small row of header pins is connected alongside it to provide earth lines for the LEDs, the current controlling resistance supplied via an inline resistor module which fits the header pins to earth. The LED board must plug straight on top of this. It is a pity that there is not a solution for the reset key, however. The Microk tower relies on the reset line on the Zorro board, and the IO uses the Atos keyboard interface which has a built-in reset line.

Assembly is designed to be easy. Oddly enough we didn't find this tower to be any easier than the others to build, although the difficulties are in different areas. This is certainly the way to go if the notion of stripping your Amiga 1000 to the bare bones makes you break out into a sweat. Assembling this unit feels more like constructing an Ikea cupboard than embarking on some serious electronics. In its final form it runs very nicely, so it's more drive bays than you are ever likely to use.

Multiple choice Zorro

With the Microk board being pinned to a larger brother, there are now three options to look at in the busboard stakes.

The Microk Z24 is the one we looked at last month, and fits in both the Microk and IO towers. It comes with five Zorro 2 slots, two GA slots, two PO slots for use with the Microk PC motherboard only and has a slot slot option. The Z24 is the same but with the addition of a SCSI-2 interface and an A486 CPU slot which allows the board to accept top of the line A486 accelerator cards such as the Cyberstorm 666.

The Zorro 2 slots have also been updated to the Zorro 3 standard. The busboard from IBM for which this tower has been designed has seven Zorro 2 slots and five GA slots. Bitronics (01 806 361 477) supply the Microk units at £149.95 for the Z24 and £219.95 for the Z24. Eytotech sell the IBM unit for their own towers at £179.99. An interesting development for the near future is the single slot Zorro card from Eytotech, which should work in any tower. Produced in response to the clear demand for graphics cards above all else, Eytotech are hoping to be able to sell the card at under £100, or for £250 including a graphics card.

The ultimate tower comparison chart

	Eytotech	Microk Intellivision	IOE Amiga
Case of construction	8/10	9/10	8/10
Standards	3/10	3/10	8/10
Keyboard interface	3/10	3/10	1/10
Floppy drive solution	8/10	8/10	7/10
Accessibility	8/10	8/10	8/10
Zero use	7	4/10	7/10
Internal space	10/10	4/10	8/10
CDROM slot	2*	2*	2
Dual motherboards	7	7*	8
Reset switch connected	8	7*	7
PCROM access	7	8*	8*
Number of bays: floppy	2	2	2
3.5"	2	0*	2
5.25"	6	2*	3
Busboard type	IBM	Microk	Microk*
Cost: Base tower & IBM	£149.95	n/a	£149.95
Tower, no PSU, Mod 1 face	n/a	£179.95	n/a
Tower, PSU, Mod 1 face	n/a	£179.95	n/a
4 floppy cables	£169.95	£169.95	£169.95**
Busboard costs: Microk (£149.95 or £149.95) IBM (£149.95)			
1) Optional extras. 2) Optional extras, includes Amiga audio out mixing. 3) Only with custom Pentium board. 4) Only with busboard fitted. 5) Extra bays £11.95. 6) Extra bays £28.95. 7) IOE do not supply the busboard, purchasers will have to buy their own from Bitronics or their local Microk supplier. 8) Or £149.95 with free keyboard, CDROM slot, and full assembly.			

An intriguing aspect of the design is that the back to front insertion of the motherboard means that a standard PC AT motherboard can be inserted into the case in the normal way at the same time as the Amiga. The card slots on the PC motherboard will deny the Amiga space for Zorro, but there should still be room

to use the single Zorro. As a more exciting alternative, we found there was plenty of space to stick a PCMCIA Ethernet adapter into the A 600 and Ethernet the two machines together for the ultimate Samesse set up. Reintegrating the Amiga to the PC eliminates much of the need for Zorro cards anyway - see page 52 of last month's issue for an idea of what this could do.

Overall the Eytotech tower offers clever solutions, with a variety of options. The final tower is nice to use, if a little messy internally it's a bit of a messier, more of an under-the-desk than next-to-the monitor tower. It has a lot going for it, but there are savings and roundabouts. It's certainly the easiest construction option for the less experienced builder, but we're not going to tell anyone what to buy. We liked it, and if you look at the big table you can see exactly how it compares to its main competitors. ■

Andrew Jones



► It did in the back, allowing access to the design's parts.

Contact Addresses

Eytotech tower, IBM busboard:
Eytotech Group +44 (0)1642 710186

IOE tower:
Intrepid Computers +44 (0)1474 336294

Microk tower, Microk busboard:
Bitronics +44 (0)1808 361477

MINI E2-TOWER Developer: Synergis Group

System Requirements

At £129.95 and a few credit card fees.

Case of use

Did it fit? At the very least, Synergis clearly knows how to fit the system into the case of a tower.

Accessibility

Look of use, showed both quality and plenty of vision. However, we found it hard to see the system in the case.

Cost of use

Did it save you the money, plenty of options and good technical support from Synergis.

Verdict

A very nice piece of kit, particularly for the not so frugal.

89%

StormC v2.0

■ Price: £229.95 (commercial license) £110.95 (non-commercial license)

■ Developer: Haage & Partner ■ Supplier: Bittersoft ☎ 01908 261466

Looks like Haage and Partner will succeed in propelling the Amiga's development tools into the present day... with just a little help.

Even those who are only remotely interested in programming must have heard about this new kid on the block, StormC, destined to appear from somewhere and, from the very beginning, it has set about stealing SAMC's crown. Now it's reached version 2.0 and the jury has been reassembled to see whether it's got what it takes.

Project Manager

StormC is a C and C++ compiler, but it's not like your average Amiga C compiler. No, it's got this Project Manager thing you see and this, above all, is its unique selling point.

Recently, the Amiga has been left behind in its development tools. For instance, the Mac was blessed with Metrowerks' wonderful CodeWarrior IDE for a while. So it's time someone kicked the Amiga into the nineties and borrowed the decent ideas from other platforms. This is exactly what StormC has done. In fact, the Project Manager is similar to that found in CodeWarrior (especially the way project sections are represented).

This Project Manager takes the hassle out of creating Makefiles, working out dependencies between files, and invoking the compiler and linker with the correct options. It's all done visually (by drag and drop, even). All options and other customisations can be set via a nice GUI. No more messing with command line tools and remembering a million different switches (although it doesn't prevent you doing this, if you're masochistic).

Everything is really simple and easy which makes it ideal for beginners, but there's still the complexity of writing some code (you'll have to cope with that, by yourself). Even seasoned programmers will find this aspect a real bore. Imagine the development time

that can be saved. Old hacks can also work their own magic using the Project Manager thanks to the new *Amiga MakeScripts* (one of the supplied examples shows how to integrate compiling Lysate catalog files).

Text Editor

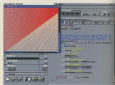
StormC is a complete IDE (integrated development environment). The most important component is the program you use to create your sources: the Text Editor. StormC's own editor is great. It's got syntax highlighting, is easy to use and is even integrated with the source level debugger.

Even better news is that now StormC has the option of using Detmar Ebert's *Global 4.0* (demo version included). There's no sacrifice. It's been integrated in the same way as StormC's standard editor. It's a clever idea since it doubtless frees up some resources to concentrate on developing the compiler. Plus, it removes one complaint against the package (the standard editor is not very customisable, as it might not suit some people).

Next on the modern features list is the protected environment that you can use to run programs. This tracks any resources (such as memory and windows) that your program obtains and makes sure they are freed when it terminates (and lets you know anything that went AWOL in this way).

Minimally running legacy programs that don't free resources requires reborrowing frequently or else you risk your Amiga crashing when memory or some resource is low. So, this feature is another one that speeds up development times and helps to track bugs.

This is one of several useful Amiga specific features and others include automated opening and closing of standard libraries and online help in the form of the official



▲ All the main components, and a completed program.

Amiga Portabook (plus a manual on the Amiga C functions in German).

The Guts

So, underneath all this is there a decent compiler? Well yes, but a reserved yes. The quality and efficiency doesn't seem to match SAMC, but the friendliness and simplicity of StormC will largely outweigh these concerns for most users. It's also very strict on what it will allow as properly formed C code (which proves it's an ANSI C compiler).

The StormC "lexer" is apparently "The program is in the test phase is equal to the final product [sic]". In practice it means the compiler can use the same options and generate the same code even if you're using the debugger or profiler. Benefits are obvious, those often have you fatter but of a wiser bug that isn't reproducible in the debugger!

StormC also has support for compiling to the PowerPC and for development of x86 applications, which is great news, even at this early stage. This shows the commitment that Haage and Partner have, and it's a clear indication that StormC is being actively developed. How many other commercial C compilers can you say that for?

Choices

One complaint levelled against the package is that its German roots are very evident. The manual is not the best translation in the world (like the StormC manuals above), and it sometimes makes funny reading.

But mostly it just means it takes a bit more effort to understand the point they're trying to get across. It's also not as complete or up-to-date as it could be, and the IDE is crying out for some online help with setting various compiler options. A couple of good highlights are the help for porting SAMC sources (the compiler is already compatible



▲ StormC With the debugger and its great variable explorer



and the separate summary and detailed descriptions of the compiler switches.

These minor grumbles are probably more serious to beginners, which is a shame, since it's the one fly in the ointment in that respect. But it's still the only choice if you're just starting out and you want a much easier life. You could struggle with GCC for free, but you'll drive yourself to an early grave into the bargain (aka Paid Pain). Or you could make do with the very dated SAGEC environment, if you can find someone who might sell you a copy – and if you can cope with any problems yourself. Making bones close to StormC in terms of ease of use.

For more advanced users, it's still a great choice. Much time is saved using this tool, and that's what good programs should do. Some old SAGEC stalwarts may complain that it's missing this feature or that, but nothing really important is omitted. There's room for further development sure, but ultimately it does the job. Of course StormC is commercial product, and while it would be nice to see some freeware packages learning from the user-friendliness of the project manager and IDE, we mustn't forget it's people like Haage and Partner that are showing other companies that the Amiga is still alive.

They have a wonderful product and need our support. The new pricing includes a much cheaper non-commercial license, and it brings StormC within the grasp of the average user, so all-in-all it's a real winner. ■

Jason Palmer

STORMC V2.0

Developer: Haage and Partner Computer

System Requirements: 68010, hard disk, 2MB RAM, DOS for Windows, C++ 4.0/5.0

Cost of tool	85%
Does the product do what it says on the tin? (the program is for sale)	
Performance	85%
Does it make other developers and non-users alike feel that it's only better	
Value for money	10%
Does the new version demonstrate a lot of extra for the price paid?	

VERDICT
For anyone other than old SAGEC hackers it's the best.

87%



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Apollo 1260/66

■ Price: £399.95 ■ Supplier: Eyetech Group

☎ +44(0)1642 713185 <http://www.eyetech.co.uk/~eyetech>

The Amiga world waits to see if PPC, DEC or Alpha will be the processor of the future... meanwhile Apollo have snuck up with the fastest 68k accelerator yet.

The Motorola 68060 is the first chip in the revolutionary 68000 series, the chip that gave birth to the Amiga, the Atari ST and the Macintosh. Now that the Macintosh has moved over to PowerPC, the Amiga is the only computer still using the 68k series as a CPU. These days Motorola point their claims in the direction of the PowerPC. Because of this, the 68060, one of the best 68k CPU designs to come off the production lines, ceased development several years ago, never making it beyond a measly 50MHz.

The fastest Amiga ever

The Apollo board runs an 1260 board at 66MHz. As Motorola have never produced a 68060 running at this speed, you might wonder how Apollo have done this.



▲ **Chrysalis:** A good benchmark test, thanks are owed to the Blazard 100 (Blazard = 1).



▲ **Power:** Mixed results fairly better than at 100.



▲ **Power:** MCF speeds things up a lot but not enough.



▲ **Power:** Despatcher saves the day!

Overclocking a processor is generally considered to be risky, but for the life and reliability of a CPU, in this case, there is a subtle difference. Pull the heatsink off, and you will see that the chip is marked 68060MCR64. That A indicates that this is the latest mask revision of the chip, an improvement in the manufacturing techniques which means that while the chip is still rated at 50MHz, it is capable of better. Apollo have not been as irresponsible as other magazines have implied in overclocking this processor so much. Apparently Motorola consider it to be just about safe at 75MHz, Apollo chose 66 to give a margin of safety.

Telling us that this chip could cope at 75MHz was like waving a red rag at a bull. We couldn't fit a 75MHz crystal, but we tried it with an 80. It seemed at our efforts not to let it be a 60MHz chip, the worse up and running with an Amiga faster than any before. It was impressive – for all of two minutes before it crashed. By contrast, in the weeks that we have had this board running 'off the shelf', it hasn't given any problems.

The software issue

The development of the 1260 and 1260 see major advances over the 68060 floating point co-processors used with the 100 and 330. The newer processors are much better at this type of math, essential to certain types of software such as rendering packages.

Unfortunately most software is written assuming 68060 code, some of which is not implemented in the more advanced instruction sets of the later processors. This is why the Blazard boards are supplied with a piece of software called Cybepatcher which patches calls to the 68060 FPU so that they use the new 1260 functions more efficiently. We had tried on Apollo 1260 board, in October of last year, we couldn't recommend it because it had no similar patches.

This board is distributed with a disk containing the necessary 140 and 160 libraries, along with the MCF commodity, which has a number of patches that drastically improve performance. Our tests showed that if you can bring yourself to deal with MCF prefs, this board does most things at the kind of speeds Cybepatcher can manage. Also, it

left the solution to everything.

The Power test on Amiga, a good real world model, still showed the Apollo board suffering badly. Just as we were getting worried, we heard about a new commercial patcher.

Qry Saviour

Despatcher claims to do everything that Cybepatcher does and more. Feed it to the new 1260 board and suddenly things look a lot better. An Images-renderer sped up from 3 minutes 40 seconds without Cybepatcher to 2 seconds with. With Cybepatcher on the loose this board is able to be a real challenger. Expect a full review of Despatcher soon.

The Blazard 1260/66 sells for £375 less, so this is not amazingly cheap. Check the chip of a recent Blazard before making your choice. We don't recommend this without Despatcher, as the things that really need a speed increase are just the things that need patching. Cybepatcher currently costs 380M via email from: newgate@jackson.com. Pay the price and get a board a third faster than any other board on the market. If it is speed you are after, this is current King of the hill. ■

Andrew Ross

APOLLO 1260/66

Developer: Apollo

System Requirements

AGN

Cost of use

Greatly outperforms disk, but doesn't do what we have to get the best from MCF

Price for value

High on value points, but need to be aware of the fact that the software is not

Value for money

Not the best value for money, but enough to justify the price

Overall

If you want the fastest, you must have this.

88



p.OS Pre-release

■ Price: £19.99 ■ Supplier: Schatztruhe/Woird Science © 0116 246 3800 ■ Developer: ProAD

**Finally we get to see p.OS.
The future of the Amiga or
just an interesting dead-end?**

Of ProAD have their own way, this OS is going to be the first real glimpse that you will have of the future of the Amiga. p.OS, the portable operating system, is designed as a direct replacement of AmigaDOS. ProAD have announced that they will offer it as an option on their Cello® test systems, supplying this as an Amiga-like environment which will go alongside Amiga and Mac OS.

The current release runs on 68040 Amiga, alongside AmigaDOS and is really more of a taste than a full OS. Trying out a p.OS preview does tend to give me an extreme mixture of feelings. On the one hand it makes it very clear that ProAD have put in some seriously good work, whilst on the other it makes it very clear that there is a long road that needs to be done. The addition on this OS provides you with a fully functioning p.OS Workbench environment with some brilliant features, but it is fairly radical on AmigaDOS.

The idea is to give you a good idea of what p.OS has to offer, so that when the full version comes out, you will upgrade to that. ProAD are not going to charge you for this, if you buy the full program, they will refund the difference.

Best 'em up

Testing up p.OS reveals a Workbench environment which at first sight reveals nothing more than you might expect from a suite of simple icons and an icon replacement. As you start to use the environment, you realise that there is a lot more to it. The icon layout is particularly similar to Workbench, which makes it very easy to get used to. There's a few small differences, but initially are large enough to convince

As the Workbench being used to access a p.OS Amiga even 65. The highly configurable system includes separate icon sets, with more provided.



you that this is really an Amiga OS.

The display system that ProAD employ is quite a departure. Graphics are calculated at 24 bit colour depth and are enhanced to whatever screen depth you display at. Amiga Workbench utilizes a reasonably clever system of grabbing pens for colours which wrap quite a lot, whereas p.OS seems to dither images on the fly from a distributed palette, which means that it can look a bit fuzzy even on 256 colour screens. A few colour backdrops that I was using had a grey background not used as one of the p.OS pens, as a result it seemed to appear dithered even in 256 colours, and totally miscoloured in 32.

The advantage of this is that it does display relatively fast – windows move solidly at acceptable speeds. Use is fine with a reasonably noisy ISA machine, but there is no doubt that this is a system best suited to fast processors and graphics cards. As the OS is intended to eventually run on next generation super Amigas, this isn't a problem.

can drop an icon into a file requester, into a shell, over an appropriate launcher icon etc, and p.OS uses a highlight system so that you know that you are over something that the file can be meaningfully dropped into.

There are numerous little touches which make this a very nice working environment, such as being able to 'regain' images on the Workbench so that you can preview them in a window, very fast delays and beautifully easy drag and drop configuration.

Functionality

The rather worrying aspect of all this is that there are some considerably important areas that need addressing quite badly. A lot of the functions required to make this an entirely stand alone OS just do not appear to be there, and rather too much appears to look into AmigaDOS, not a good sign for a quick PPC release. At the moment p.OS appears to be a very sophisticated Workbench replacement in the Copas Magellan mould rather than a fully fledged OS. With more than just a mountain of work to do and also the uncertainty of not knowing which way Gateway 2000 is going to turn, it's hard to know what the future of p.OS will be.

It has always seemed a little unlikely that a small software firm specialising in animation packages could pull off a fully fledged, world beating OS, but having seen this I can't help but think they might do it. ■

Andrew Kerr

What do you get?

- Configurable desktop
- Advanced drag and drop
- Icon packs
- Full p.OS shell
- Open & file
- Selection list
- Multiple configurations
- HTML AmigaWorld
- Built in image viewer
- AmigaWorld viewer
- Teletext colour games
- Pascal drawing
- System C for p.OS
- Animation software

Drag and drop

There isn't enough space here to go in depth into all the features of p.OS, that is more the domain of a feature than a review. There is a lot in this, a couple of noteworthy features are filepicking, which allows the OS to recognise different types of file and load an appropriate display utility, and the excellent drag and drop implementation. You can drag and drop transparently into almost anything. You

FFNews 2.0



■ Price: £29.95 ■ Developer: Thorsten Stockmeier ■ Supplier: Eytotech ☎ 01642 713185 www.eyetech.co.uk/~eyetech/

The Amiga got off to a slow start with full featured Usenet Newsreaders, and though FFNews has already seen a public incarnation released it was hampered with a lack of features and a large bug list.

However, it seems all the interest has spurred Germany's Thorsten Stockmeier, and bigger and better things. FFNews 2.0 is another example so, excitedly, we spun this preliminary version. FFNews is a MUI application, and exploits this through the use of MUI features. It goes a little way far in the preference with lots of pages, with only a few adjustments on each. There are many options in FFNews 2.0, including: built in tag lists, POP encryption support, mailing list and worded filters, configurable buttons to the reader window, auto download, pop3 and SMTP mail support built in just ones.

To begin, we need to subscribe to some newsgroups using the Group Manager window. The first time the Group Manager is run, FFNews downloads a massive list of

newsgroups which can take ages. Browsing of the 20,000 word list is excellent, with a quick find to search for keywords such as Amiga. It's also possible to subscribe wildcards and there's an excellent newsgroup catalogue where some interesting groups can be dragged to for checking out later.

Browsing a newsgroup activities is now window. Here FFNews 2.0 proves to be a fully threaded reader showing all the posts neatly nested into their hierarchies. There's very handy buttons to fold all the threads for quick access to interesting topics. Clicking on a message tree up the reader window, making three similar windows on the screen which I think is clumsy.

MIME attachments are in a frame at the top right, and buttons at the bottom choose such functions as navigating to the next new message, replying via E-mail or a public post etc. Sadly the icons are too large, so there's a large scrollbar to move across them all. You can turn the images off but even the text links are too large. Although today you



can drag in small images, so hopefully this will come soon. I wish the E-mail/news posting fields had a touch more control for cross-posting but the built in MUI text editor is adequate enough to make carriage returns. The scheme isn't as well thought out as Microsoft's, but FFNews is still a great newsreader with plenty of future potential. ■

Mark Bebbington

▲ FFNews 2.0 is a superb news reading package. Here we can see all the windows and its interesting editing.

System Requirements:

Minimum: Amiga 2500 required

VERDICT

The Amiga best newsreader to date.

90%

NewYork 1.0

■ Price: US\$35 ■ Developer: Final Development ■ Supplier: Gamasaft <http://www.mich.com/~twalling/gamasaft/>

NewYork is a new contender to the newsreader throne, coming from Final Development – authors of the ClassicNet GUI system and allegedly the forthcoming Web Cruiser browser. NewYork itself is from ClassicNet writer, Christopher Adl, so we can expect it to look a lot different from the MUI newsreaders. Choice is good.

The main window has the newsgroups at the top, in a separate partition, but when you click on a newsgroup the top partition turns into a list of messages in that group. I've got two things to say about this. First it's a brilliant idea, there's no point wasting space on the newsgroup list when you're reading a newsgroup. Secondly, unfortunately the author didn't seem to think that threading was important and it remains completely unimplemented. Quite frankly this is outrageous.

It's difficult to find the messages and threads you want, as the number of messages can't be folded into their respective

threads. To make matters worse, you can't even drag the message partition larger. Clearly we're suffering from ClassicNet's deficiencies over MUI whatever critics may say.

On the plus side, the function buttons in the middle of the screen are extremely well done. There's even a pop-up MUI bubble-style help for each, though it seemed small. Pressing the follow-up button does spawn a new window which seems appropriate and neat. There should be a way to inspect the windows as they open in your preferred size but I couldn't find it, which meant resizing the posting window every time. Other nice features include the small time display, for seeing how long we're online, and the hierarchical subscriptions manager cutting the list of newsgroups. However that's the only feature in this area, there's not even a find of any kind. Another obvious feature omission.

Some thought has gone into the GUI layout and I commend the author on this often neglected aspect. However the features are



seriously missed and it was painful to navigate and contribute to busy newsgroups with a lack of threading and non scrollable windows.

For features FFNews wins, and NewYork for tidiness – which leaves MicroDan 3 in between with its settings on the window modes. My advice is to try all of them in their demo forms, you'll find them on the CD in the Magazine directory. It's not just a feature name, it's about what you're comfortable using. My vote goes to FFNews 2 but NewYork is still a worthwhile effort. ■

Mark Bebbington

▲ NewYork has a tidy name and may win, but, single window for most of the operation. Shame it's not loaded up by the feature list.

System Requirements:

Minimal: Amiga 2500 required

VERDICT

A good quality though basic newsreader.

79%

Supra Express 56

■ Price: £139.95 ■ Developer: Diamond Multimedia ■ Supplier: Active Software ☎ 01325 363260

O load the way Supra consistently provides high performance modems at a good price with Amiga support, but having been swallowed into the PC peripheral giant, Diamond Multimedia, it remains to be seen if the tradition continues. The SupraExpress 56 is the first 56K modem under review, sporting the K56flex standard, the competitor to USB's X2 standard.

Faster is better

The new 56K modems perform some magic relying on the fact that telephone lines are digital and so it's possible to detect the individual samples and use the line to the highest degree possible. It's a lot more complex than this but the gist of it is that you must have a digital telephone line all the way to your Internet Service Provider to get a K56flex 'connect'. In the UK, almost everyone does. The SupraExpress 56 is a small, largely featureless, black box. It has no buttons, no telephone through socket and the serial lead is mounted directly into the

back of the unit. These are cost-cutting decisions and I miss the older Supra's metallic box, front-panel power, telephone pass-through and that famous Supra funky LED matrix status panel. Oh dear.

You should consider a faster serial port to get the most from these modems. See the reviews of the HGSart Whippet and the Eversuch Port Plus Jet. Performance is the crucial and the whole 56K modem situation is overrated. People who achieve real 56K connections are legendary, normally achieving 44K, 40K or if they are very lucky, 49K. Yet the modems are sold as 56K modems.

The Supra delivered consistent 48,000 connects to Usenet via our laboratory lines. I flashed our USB Courier's firmware to X2 and it delivered 44,000. On a BT line, the Supra consistently delivered 48,000 and the Courier 44,000. The courier is more expensive and since the Supra (and Courier) can be flash ROM'd upgraded to the official standard, when it emerges, choosing X2 or K56flex seems irrelevant. Despite performance gain, I don't like the physical ambience



▲ **Box that Supra has been swallowed into Diamond Multimedia, the dark hardware design is what we can expect. Still, it delivers the goods.**

as five dim LEDs and lack of pass-through. Thankfully it works fine with SFFs. For a first time modem or if you want the small speed improvement now, go for it, but make sure it's supported by your service provider. ■ **Mark Williamson**

System Requirements

For Amiga high-speed serial port and digital telephone line recommended.

VERDICT
A good solid performing modem.

84

Zyxel Omni.net

■ Price: £225 ■ Developer: Zyxel ■ Supplier: PowerMark ☎ 0181-856 3750

O ISDN is significantly different from normal modems. Because you need a true digital ISDN line installed, no modem is needed to convert data into sound and vice versa as the humble modem. Instead all that's needed is an adapter that converts from RS232 serial to the ISDN data stream. These are called Terminal Adapters or 'TAs' for short. The Zyxel 'Omni.net' is one such unit, capable of operating at up to 128,000bps if both 'B' channels are used (which costs twice as much).

The Zyxel is a cream unit with a dark green plastic bezel which the LEDs can be seen through. On the back is a connector for a standard ISDN 2-wire which is typically a box stuck on the wall when a tele-comec installer installs the line. There's also a rear-mounted on/off switch and two sockets for telephones. ISDN provides two lines, one voice and one data is common and handy. Behaving exactly like a modem, one will have to dig in the manual to set up the TA with the right standards via Hayes-style

commands. This TA supports virtually every ISDN standard from V120 with built-in V120 line compression to MultiPPP with STAC compression. From my tests I've worked with V120 but performance was slow. With MultiPPP performance was amazing with a full 64,000 connects.

Another advantage with ISDN, when dialling, the result is instant. You connect and log on instantly without any negotiation phase. Using MultiPPP the normal sampling method of logging into an ISP is bypassed and the PPPCHAP method, such as provided in Miami, exchanges the username and password automatically. In practice it means you're online in three seconds. What?

What can I say as you'll expect performance is staggering. 64,000 connects real world downloading rates of well over 700Kbps. I've configured the modem for 128,000bps dual channel and rasped in data all around the 150K mark! Naturally for both rates, we need a fast serial port. I was using a Port Plus Jet looked at 960,000bps and the results were amazing. Web pages ripped in,



▲ **Here's the fast solution! Terminal Adapter: 64,000 of one speed.**

and means 'flow along, it was so good they're not getting the Zyxel back. He sees I love ISDN and though the price has fallen dramatically it's still out of reach for everyone but the hard nut heads. That said, Net heads can't afford to be without it and the Zyxel is a superb ISDN TA supporting every standard under the sun. If you're serious about the Internet and you can afford it, get ISDN and get the Zyxel 'Omni.net', you won't regret it. ■ **Mark Williamson**

System Requirements

ISDN service at a high speed serial port.

VERDICT
Excellent and powerful ISDN TA.

95

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PD Scene

Cartoons, dinosaurs, galactic empires and fast, beautiful voxel flight games. Andrew Korn views some more gems from the world of PD.



★★★★★	Totally blinding
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Substandard
★☆☆☆☆	Oh dear

Firewall

■ Commande clone

■ Available from: Amivoxgame/demos/firewall.cdx

■ Size: 1.6 MB

Oh alright then, I admit it, give since I saw Commande running like the clappers on a 486 at a European Computer Trade Show I've had a real soft spot for voxel engines.

I've played with things like voxelEngine25 and wondered why no-one ever bothered to attach a game. Probably because doing anything other than a flat-topped voxel practical took coming along a month or two ago and was the closest thing yet, fast, very pixel, capable of swooping and banking, but prone to crashing. Now we have Firewall. It's fast, pretty and stable. It's got a game too.

Let's be honest about it, the game is rubbish. The assorted fuel dumps, tanks and guns you have to destroy are crudely dumped bitmaps and the tracking of 3D positioning is pretty poor. Trying to shoot things can be frustrating — you move the slightest amount upwards and your missiles head on a ballistic course; sometimes instead of plunging into the ground beneath your feet. None of which matters because there's a blindingly good game engine there and you just know that given a bit of time to work on it there's a few games in there too.

This is all beside the point. This is in a lot of ways more of a demo than a game. You



fix this thing up and get a chance to wonder at what those weekly orders have persuaded your little old Amiga to do this time. ★★★★★

Galactic Empires v1.5

■ Space Strategy Game

■ Available from: PD Forum, 15 Lovelock Avenue, Aston, Sheffield, S28 2SD

■ Tel: 0121 650975

■ Price: £1 for 2 discs & 15p P&P

It is believed by certain groups of eastern mystics that each person takes within them a single, perfect invention. We can never quite grasp that hidden invention, but we struggle through our lives to achieve it.

For some it may remain a distant heartbeat of unfulfilled potential, for others though it is a driving force that fuels their lives. An old friend of mine has for years been possessed by the perfect space strategy board game, a bit like Diplomacy, but with lots of extra stuff to it. For years he has been trying to squeeze that game out of his subconscious depths. It seems that Mark Tiers is possessed by the same motivating force, and being less lazy than my acquaintance, he has written this program.

Galactic Empires is one of the types of game that you take one look at and wonder how anyone could have the cheek to release it on any poor 486 platform, and then go on to deciding that there's actually rather a lot of good stuff in it. Presentation is horrible, with low quality pictures and one of the most grotesque menu systems I have seen since using Word Perfect 5.0 the other day. Mark should get someone in to do a nice

GUI front end and pretty graphics sequences, because he's clearly far too busy cramming features into the game and I for one don't think he should stop. GE is a turn-based game for two or more players. Each player starts off with a planet in a typically end-of-the-spiral-arm backwater, and has to build up an empire in order to challenge the other players for galactic domination.

There are a whole range of spacecrafts to build, some that carry troops or cargo, some that are warships or orbiting planetary defence bases. Alternatively money can be used for firing a privateer fleet to harass enemy shipping, trading with other planets, or sending spies to sabotage, recruit or plant exotic plagues on other planets.

I played this game about long enough to find that throwing everything you have at the enemy in the very first couple of moves, leads to total loss of all your forces. Also, long enough to determine that if I played this game any longer I'd get too far into it and never get around to writing this page. If turn-based strategy is your thing you are bound to find this an interesting option. ★★★★★

Maniac Ball

■ Arkavold clone

■ Available from: Online PD, 1 The Cupress, Hazel Lane, Farnley, Leicestershire LE19 3PS

■ Tel: 01754 834288

■ Price: 75p plus 75p P&P

How can anyone justify another Arkavold clone? By offering something new, or by





thing it so well that no one cares if they already have 40 versions of the same game in their collection. This one attempts it by jockeying in all those standard extras such as soundtracks and exploding barrels, giving you no important and not so common extras such as an editor. Then it changing the whole fundamental game structure by getting rid of its walls for the ball to bounce off.

Wow there... back up a line. Did I say to wait for the ball to bounce off? What happens when your ball heads off towards the top or sides of the monitor? You gotta get them with your bat too, huh? 'Yea. Which is probably why you get four bats. That's right, two four bats. Move the mouse up and down and the four bats at the sides go up and down. Move the bat left and right and the top and bottom bats go left and right.

It all begins to sound like there is something really new and challenging going on here, but where *Antaroid* is concerned that's just wishful thinking. The novelty of the four bat system quickly wears off and you feel that it's actually pretty similar to play as any other *Antaroid* clone. A good one, and definitely a clone that deserves a place in the collection of every *Antaroid* fan, but *Antaroid* never the less. ★★★★★

Charley Cat Quickie 4

© Cartoon

Available From: Rowena Smith PD, 188 Golden Way, Harpenden Garden Suburb, SG8 6HT, UK.

Price: £18.95, £19.95

Price: £1.80 for 2 disks plus 50p P&P

Well did Anthony Whitaker, eh. He's back at the helm, juggling over a hat. *Mauseter* is wiring up another Warner Brothers mode prison featuring his favourite trouble prone

Game of the Month...

Captured Dreams (TBL-CD)

© Demo

Available From: Antares Technology, 101, 101, 101

Price: £15.00

Demo go in cycles. Someone comes up with an impressive effect, and other coders, being coders, decide that they want to figure out how it was done and do it better. Eventually, someone gets bored. They see some effort - from outside the demo community - or they stumble across some clever programming trick, and come up with something new, something that will really impress the gamers. But that comes and soon everyone is trying to imitate it.

It has been a while now since anyone has tried to offer much beyond better and better light sourced morphing blobs and heavily texture mapped warping tunnels. This one has a fair few of the old favourites, but that doesn't mean that it is something.

If you buy a Sony PlayStation, you get a demo disk with a bunch of playable game demos. Buried in the disk somewhere is an impressive little demo which shows a very nice texture mapped tyrannosaurus running along the screen which you can move, spin and cause to roar. In this demo there's also a rotating texture mapped tyrannosaurus. Perhaps not as good, and lose the fact that you can't control

its motion implies that it is not such a feature piece of code as the PlayStation job, but then this runs fine on AGA and OGS, not the 3D graphics hardware and RISC processors PlayStation programmers have to play with.

Don't get me wrong, there's a lot more to this demo than the discussion, which is really just a general one. It's just that, like Jack Nicholson in *Batman*, that also really steals the show. Expect bits of texture mapped warps in future demos soon. ★★★★★



mugger Charley Cat. Anthony's animation skills visibly improve with each new production, and even though he is still lagging a little behind *King Solomon's* slick professionalism, Anthony's work has an excellent dynamic.

In this installment Charley has invited his fiancée over for dinner only to find that he has no fish left in the fridge. There is a lot of a flicks and other general antics as he goes off to find another one.

If there's something to fault with Anthony Whitaker's work it is that he lives in much in the shadow of his influences. A lot of the cartoon movements, the blurs, streaks and popping eyeballs, come across as being derivative rather than inspired. Similarly the ending seems like the result of an incoherent cartoon logic rather than Anthony's own

twisted mind. What made Chuck Jones great was that he constantly pushed the envelope, he spoke the language of cartoons, but forced his own dangerous doggerel into the vocabulary.

Don't take these criticisms the wrong way, this is a fine short and one that any collector of fringe cartoons must immediately snap up. I make criticisms only because I can see a much better cartoonist hiding away in there somewhere, just waiting to find his own vocabulary. ★★★★★

Cavern Commander

© Ch. clear...

Available From: PD Power, 15 Lovell Avenue, Woking, Surrey, GU24 0PL

Price: £12.95, £13.95

Price: £1.50 per disk + 75p P&P

First off you've got this blob. Also there's a cavern. And then there's some other blobs that might possibly be battles. The cavern itself, it's extremely crude to look at and in addition it's unplayable.

I should think that some person probably spent a fair amount of time writing on this game and learnt a lot whilst they were doing so... and all that I can say is the best of luck to them. The whole learning process was probably well worth it for them and the experience should therefore be encouraged, but unfortunately not by purchasing this game disk. Is it OK if for me to go home now please? ★★★★★



Only Ch. without hat

PD Utilities

Another selection of utilities are placed under the spotlight by Andrew Korn. Directories, slide shows, graphics handlers... he casts his verdict on the lot.

Utility of the Month...

Summary

■ **Themen: „Kriegsgefangene“**

■ **Available Now:** Classic Bridge #2: 71
Overgate, Redgate, Manchester M20
2004 1st 2001 2nd 1999

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Now this is a serious piece of work. You can tell from the start that you're dealing with more than your average piece of CD-ROM: the disk consists of an archive containing 3MB of data. When you look into the features list and the PowerPC support, you see why the author thinks that being too tight on pay (the \$2.95 [US] registration fee) is a bit out of order.

SuperPaint is an image manipulation, conversion/display, screen grabber utility with about a billion features. It may have a nice easy-to-use GUI front end, but make no mistake, this is a serious screen manipulation tool.

This is an ideal package for people who want to do a lot of manipulation. The school also taught this machine is

that it's quick and powerful. No huge application to load up, no elaborate menu and bar doing straightforward tasks. Just a nice simple Spreadsheet GUI which sits on your Workbench, challenging you to find some obscure file format that it doesn't know.

SuperWin95 is tightly modular, based on the SuperWin32 library and a plugin system. Adding new file format readers or new efficient operations is just a matter of dumping them in the right directory. The PowerPC support (which will be sold as a plugin) will automatically take advantage of the enormous speed increases PowerPC installation will offer.

There just isn't enough space available to go over all the features of SuperNewsFBI here, so listen to my advice and get the demo to try it for yourself. The demo has bugs and only shows an IFFs, but will give you an extremely good idea of what the package is capable of. Most definitely a must for serious members only. ★★★★★



- | | |
|-------|---------------|
| ★★★★★ | Totally blind |
| ★★★★☆ | Good |
| ★★★☆☆ | Average |
| ★★☆☆☆ | Substandard |
| ★☆☆☆☆ | City clear |

Online Manuscript 32-1

[illegible]

■ **Marshall Islands Power**, PO Box 99, Lower
Pavilion, Apsara, Sheffield, S10 2BQ tel 0114 276
700000

■ **Colleges** *Willers* wrote about in 1995, *Forbes* 1999

Directly utilities have taken a hell of a long way since the days of Climate First for the Design, and the Climate, most directly utilities have now adopted a flat, windowless building form.

SID, DiskMaster and Directory Opus have all followed this path, until quite recently that is. Directory Opus transformed the game with DOpus 5.0, moving towards a multiple windows/floating button approach, which blends the functionality of Workbench together with the more traditional directory utilities.

As Magellan, its most recent incarnation, QIPsys has become entirely capable of replacing Waterhouse. Whilst the majority of people who have come into contact with Magellan do rate it extremely highly, there are still a bunch of hold-outs who much prefer the old, two-lister style of directory utility. I expect that these parties, duly warned, should be considerably happy with the most up-to-date incarnation of FindMaster.

DiskMaster is a power tool. Sure enough, it doesn't support multithreaded multitasking, but what it does have in its favor is a reasonable degree of file/directory recognition and a highly configurable button system. Buttons can be simply changed and programmed, and it will do a fantastic job of filtering through the latest Amiga disk, de-archiving files and displaying contents.

Unfortunately the presentation would appear to be a little bit lacking and it features text gadgets rather than buttons – which could possibly be good in terms of clarity, but it's certainly not something you'd want to keep staring at for long periods of work time.

Nevertheless it will do a lot though, and if you are overcome with a feeling of despondency to escape from the modern era, then this is just one of the ways you can do it without missing out too much on the modern scene. ★★★★★



AGASSM Demo

■ **Type:** Slide Show

■ **Available From:** Jaxida Trampa PD, 1 Jones Mill Close, Goldthorpe, Rotherham, S62 8BY Tel: 01709 688127

■ **Price:** 60p plus 50p P&P

You might think AGASSM stands for AGA SlideShow Maker. You would of course be right. Except for the fact that AGASSM works fine on ECS systems as well. Really, if there wasn't enough trouble without people like AGASSM (and/or that 'terrible' sliding in and randomly distributing features entirely contrary to the owners).

AGASSM is driven from a nice GUI front end. It sequences a slide show from a series of objects, which may be graphics, animations, sounds, masks or even APress scripts. A collection of wipes is provided, and each one is selected by clicking on the appropriate icon. Even producing quite complicated slide shows with AGASSM is usually a lot easier than you'd think.

The program even does a good job of filetype recognition, offering only the appropriate choices to you when you select an object. The potential of the object part is intriguing. The obvious possibilities this offers is to extend its current level of functionality. You could, for example, include an APress script which sent a Mailbox mail to a Project 82 if you wanted real-time level sound output on a Project 82 equipped Amiga.

The one thing which I found disappointing about this program is that there's no support of alternative filetypes. Samples, gifs, anims, are all PFF only. True, it is advantageous for a slide show to have the data in a form which is quick to display, but it would be nice if this package supported a few industry standard formats such as jpg and png graphics, AVI and QT animations and WAV samples.

The demo gives you a good idea of what is in store, but if you are after a decent slide show maker, then it's better to save yourself the bother, and just go straight for the full version instead. It works but more expensive, at only a couple of pounds extra. ★★★★★

Class HD Util 22

■ **Type:** Utilities/Argument

■ **Available From:** Classic Amiga PD, 11 Ravenscroft, Potholme, Macclesfield M20 2JH Tel: 0161 752 7658

■ **Price:** £1 plus 75p P&P per order

Those wacky chaps from Classic PD are at it again, churning out disks crammed with little utilities. Less earthshaking is a pretty template for FinalWriter, a random Wordsearch, backup/restore, a Wordsearch version checker which checks MUI version too, and screen blaster which fades nicely etc. In the midweek category, is a file viewer - basic but pretty small - that's useful for people after a small executable for untested floppies.

The two most interesting packages are ArchiArch and Gui 4 Unzip - de-archiving utilities. ZIP is the standard archiving utility on the PC, and whilst not as efficient as tar, it's very common. There's been Amiga versions of ZIP available for a while, and it's essential for anyone likely to move files cross-platforms to have Gui 4 Unzip. It is a simple script using requestio and requestio to handle the cli interface for the unzip command also provided. ArchiArch is a more sophisticated un-archiving utility.

It is an app-learn which sits on your Workbench waiting for files to drop on it, unarchiving anything you feed it to a specified directory. ArchiArch only unarchives ZIPs to the directory they're loaded from which is a pain, but this Gui 4 ZIP does a great job of zip - all those drivers - with selectable destinations. ZIP contents listing and file integrity checking.

Not another quality bundle of utils from the Classic guys. ★★★★★



Best of Aminet

The Aminet wasn't so active this month. It's interesting in the Amiga freely distributable software waiting at last? Hardly. What actually happened is the Aminet filled up. Worse than, the Aminet's home is back on line on a 110 Kb RAM server. Lots of uploads disappeared whilst this happened, but there was still plenty to see, do and download.

If you have been using our DiGpus command, or upgraded to a newer version, you really should move on down to his diGpus. Notable new arrivals in that neck 'n the woods include diGpus/62_Floppyops.lha (144) which has a whole bunch of floppy extensions. If you are on DiGpus 4, you'll find things in there of use. His recent re-uploaded, binDrops/VCopyops.lha (104), a version checking copy command.

Want to network a couple of Amigas together? Don't wait for the next C2 Amiga DIY either! csmcnet/disknet.atlha (204) may be just what you're after. This edition contains a device driver and the hardware schematics for a nifty little 204's pseudo serial link via the floppy disk port. Don't get too excited about fast modern connections, this isn't a true serial connection, but should make an excellent alternative to serial.

Check out RTUnits at units/rtunits.lha (76), a couple of CLI commands which use the freepops library. RTUnit is a command which replaces the standard requestio command, and registering string returning functions. Very nice. Something for the less advanced user? Peter Harbison's guide to hard drives could come in pretty handy at boot/help/hardDrive.lha (8).

As always the Aminet provides fun as well as usefulness. Regular readers should have picked up on my liking for moral engines. Latest example to check is Maxine Robinson's effort at game/Amiga/MNF/Amn.lha (504). This one is an attempt at a visual driving game. It's in its early stages yeh, but well worth the download. This month's pic of the month is Davide Rigazzi's rendered version of Robert's painting of the temple of Karnak, which can be found at pic/trace/palace.lha (374).



Why Apple?

One day we all hope to see the rebirth of the Amiga with a PowerPC processor and other new features to enable it to compete again with today's systems. Sadly though, more than 3 years since Commodore's demise, little of substance has actually happened! We've seen prototypes and heard promises, we all hope to see new Amiga developments.

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[illegible]



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Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	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Pennsylvania
History

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[illegible]

Wages and hours

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[illegible]

*Always read the label on all medicines - use it each time you take them. The National Health Service has leaflets explaining how to use medicines safely.

Identifiability:	Initials:	Surname:	Daytime Phone:	Evening Phone:
Address:			Main use(s) of computer: <input type="checkbox"/> HOME <input type="checkbox"/> BUSINESS <input type="checkbox"/> SCHOOL	
			Current computer and accessories:	
Country or Country:		Postcode:		

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CD-ROM Scene

A round-up of some of the choicest discs about for all of you 'sorted' CD-ROM drive owners.

Dinosaurs ROM

■ Available from: Power Computing, Unit 15a Singer Way, Cambridge CB4 2YU.

■ Tel: 01234 851500

■ Price: £99 + £2.50 P&P

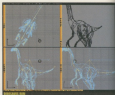
A topical release this, given the current success of the pretty – but vicious – *Lost World*, the follow up to Spielberg's mega hit *Jurassic Park*. The effects evoked at Industrial Light and Magic are as over the stars of these two blockbuster movies, their CD dinosaurs entirely making up for the utterly mythical plot and acting.

Animap were apparently used in the design stages of these models, and if you doubt for a single moment that an Amiga would be capable of producing CD



dinosaurs of that sort of quality, then just take a look at this disc.

Believe it or not! I say the stakes in this field are very high indeed. The standards set in *Lost World* and *Jurassic Park* have led people to expect seriously the the dinosaurs with accurate textures, good movement and fluidly organic shapes. Taking a look at the price of this CD, you'll see that this is very much a tool for the professional user, and if you are trying to make a living,



you're going to want models which are good enough to stand up to the high expectations set by the Spielberg movies. Fortunately the models on this CD are really pretty good.

The disc has 10 models on it. A tyrannosaurus, a gallimimus, a ceratops, a brachiosaurus, a pterosaur, a velociraptor, and – all species if not exactly off top – a shark and a megalodon. The models all come with bone maps, colour maps, and specular maps. They all have bones to facilitate animation and inverse kinematic features.

The models are in three formats. Imagine, Lightwave and 3D-studio (as, this isn't an Amiga package, this is a multi-format disc). Rather disappointingly the Imagine models seem to have been designed with Imagine for Windows users rather more in mind than Amiga Imagine users, so the brushes are all in Targa format. However, it should be perfectly possible for someone to copy the models to their hard drive, then assign the path where the model will look for its attribute files and convert the brushes to IFF.

The Lightwave models have brush maps in IFF and Targa format already. Lightwave doesn't have such a tight path setting command built into the objects as Imagine, which is why it's possible for them to do this. For Imagine they would have had to repeat the model sets for IFF and Amiga Imagine versions. This would have cost in the region of another £2000 or so, which would have meant dropping something else from the disc, so the exclusion of this is perfectly understandable.

There are a lot of extras on the CD. As well as the main formats, the models are also to be found in VRML and AutoCAD formats. There is a nice collection of sample pictures to show you the kinds of things that can be done with the models, and short ani-

Amy Resource – European Edition Vol.1

■ Available from: World Science,

Q Treco Way Business Park, Humberstone Lane, Leicester LE4 9BL.

■ Tel: 0116 248 0880

■ Price: £19.95 plus £1 P&P

Ho-hum, yet another CD collection. There are enough of these on the covers of mags, why pay twenty quid for another one? Well, if it's as good as this, that's reason enough! This first European Edition brings to a wider audience the Italian Amy Resource disc, clearly a top-notch collection. This disc just seems one and attention to detail, down to the specially provided Eric Software covers and the reproduction of the comic image on the CD back.

The contents of the disc are along the lines of most other similar collections. There is an directory of pictures, games, demos, important tools and so on. A fair bit of attention has been paid to making everything work nicely from Windows, the picture directories being a notable example. Each directory is accompanied by a pointer file, which allows you to view a catalogue of the directory's contents and view from there. As well as having all the standard click to activate stuff there are also some rather handy directories of archived software which you click to de-archive.

Perhaps the most impressive part of the disc is the commercial and registered software. You will find some versions of PPaint 3.0, TurboCAD 4, Drawweldio, PCFlash, Sixth Sense, Stereo C,

Stem Word, and a bunch

more. A good collection, although you'll probably already have a few. On the other hand,

the fully registered versions of Amiga 5.0.5, Image Studio 1.0, WebPlug 1.0, ProGrid 4, PaintMill 1.05 and Backfill 1.4 is a rare and excellent bonus indeed.

As with all such collections, one overriding issue is how much of the software on the disc you already have. This is not a cheap collection, but you do get a lot for your money. The registered software is a quality collection and one that you'd have to work at to get those other versions. Ultimately if all the software I've mentioned doesn't interest you and you collect all the Amiga stuff, there's not a lot to offer, but this is a brilliant example of its type. Top marks to Louis Bonello of Interactive for a top CD. **82%**



nations of each model in PUE, RVT and CT formats to show how well they can move. The models even come in low polygon versions for users with less memory to spare. There is no doubt that you're unlikely to find as a bonus on this CD unless you are pretty ardent about your animations.

You'll probably be happier with the money spent if you are a Lightwave user than an Imagine user, as the Lightwave models have a neat edge, most notably on the bones structure. Overall this is a very professional production, with good models and a very professional price. **80%**

DEM ROM

■ **Available From:** World Science, Q Troon Rise Business Park, Humberstone Lane, Leicester LE16 5HA

■ **Tel:** 0116 346 0990

■ **Price:** £9.99 plus £1 P&P

OK, so we gave you Vista Pro last month. He gave you a bunch of DEMs. But where can you get hold of some more? Here is the simple answer. This CD-ROM from Graphic Detail is currently being knocked out by Field Science at a very nice price.

There are over a 1000 DEM files on this disc and each of these are topographical models of a part of North America. The DEM or Digital Elevation Model, standard was developed by the US Geological Survey team to present a form of mapping system which would record full 3D data of a landscape. It simply works by dividing up a plot of land into a grid and then recording the height of each element in the grid.

The information can be stored in ASCII format and reproduced by a computer. DEMs such as these can be read by Vista Pro, SceneMaker, and also by certain

Aminet Set 5

■ **Available From:** World Science,

Q Troon Rise Business Park, Humberstone Lane, Leicester LE16 5HA

■ **Tel:** 0116 346 0990

■ **Price:** £24.99 plus £1 P&P

Here we go again, another Aminet Set, another CD Aminet collection. This collection contains 4 CDs of LRA archives, covering the software uploads to the world's largest site, over the past few months. There is about a gigabyte of data on these discs which will cover for us the regular Aminet CDs, and you get UltraMED Sound Studio, a great bonus if you didn't get our March issue when we gave it away, plus Amulites and ConDo 2.5.

The collection of uploads includes around 4 gigabytes of software in around 7,000 archives. Check the table to see the breakdown. The discs, as usual, are well arranged with the new traditional Aminet front end. You can search for whatever you are looking for, you can browse your way through the discs, and when you click on an archive, it will either unarchive or plug,

whatever you like.

The contents of this CD, as you would expect, contains everything from the utterly dies to the truly wonderful. There is some of pretty much everything, but with this amount of data, what else do you expect? The ultimate CD collection. Once again. **94%**



Aminet Set 5 contents

lra	84Mb	misc	59Mb	demo	810Mb
dev	710Mb	test	40Mb	game	270Mb
data	194Mb	util	194Mb	common	100Mb
docs	88Mb	gls	151Mb	tools	801Mb
hard	9Mb	pls	941Mb	misc	41Mb

versions of Lightwave.

The models on offer are mostly about a megabyte in size, offering 1000 by 1000 pixel resolutions. These ultra high resolution models are well worth getting your hands on for the amount of extra polygon data pro-

vided by your rendering package, but often the scale of the landscapes is so large you find that they appear very flat. This is because the areas covered are so large, that even tall mountains are a little short in comparison. You can get in close, but this means you are losing a lot of the resolution gain, or you can steadily raise the vertical scale ten-fold or so at the expense of realism.

You should ask yourself what you need this disc for if you are planning on buying it. These DEMs do look more natural than one you generate randomly, and if you want to do renders of bits of the US you can't go wrong. It can't help feeling though that it would seem a lot more interesting and better value for money if there was a better range of DEMs, as some maps of the Himalayas or Alps would surely be better than a flatish DEM of some corner of Delaware. However at this cost, you can't complain too much. **84%**



Art Gallery

Send pictures to: Art Gallery, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ or E-mail them to artgal@cu-amiga.co.uk.

Beetle by Auburn Hodgson



The colourfully named Auburn sent us a colourfully produced picture. Firmly in the school of the magic realists, the use of photographic source material contrasts strongly with the hyperreal colours.

Crusader by John Lawther



A hand drawn image of a crusading knight, drawn with QuarkX, Paint and Brilliance! The blood-splattered surcoat, distant fire and carrier birds belie the traditional image of a Christian Knight.

Indestructible by Andy Kinzle



Produced using Imagines 4.0, ImageFX1.0, Photogenics and Paint. TFX may let you fly EF 2000s but it doesn't have enemies like this! The blur effect on the spaceship works very well.

Pollerg by Jeff Ransinghe



Jeff used Lightwave and Photogenics to produce this H.R. Giger influenced image. A very cinematic composition.

Pueblo Bowl by Vivian McAlexander

**Picture
of the
Month**



American artist/musician Vivian McAlexander produced this excellent Imagine reader of a piece of American Indian pottery with hand drawn brush maps produced in DPaint. Minimalist but showing Vivian's excellent colour sense.

House in Livingroom by Jeroen Hooythuizen



A Real 3D render with DPaint and ImageStudio for post effects. An amazing juxtaposition of the Lego house with the house containing it. The Lego - like De Brij chair is a great touch.

Picture formats

Most contributions to Art Gallery can be found on the QAGD. Please avoid sending JPEGs if possible. TIFF, GIF or PNG give best results.

Vases by Vivian McAlexander



Another by our American reader with a penchant for Imagine with DPaint textures. We've seen textured vases many times but these hand drawn textures make this one stand out.

FOUNDATION
The Ultimate Amiga Strategy Wargame!

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ONE ESCAPEE

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Your Machine's Serial



Workshop is here to give away some of the best Amiga trade secrets and almost certainly increase your knowledge with the finest tutorials on the planet.

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Amiga Workshop

PART 10 Imagine 4.0

Did you enjoy splashing around in puddles when you were young? John Kennedy still does it, so pull on your wellies and join in the fun.

The idea for this month's project came from messing around with another rendering program, Cinema 4D, and trying to animate a real-life ripple on a pond surface. You've seen what happens when you throw a stone into a still pond – there is a splash and the ripples spread out radially from the centre in a series of concentric rings.

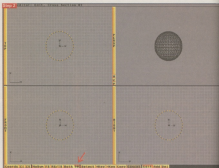
I thought about it for a while, and then turned to the ultimate rendering guru, Steve Wotley, who created the seminal 'Understanding Image 2.0' – and has contributed many test files on Imagine works such as the 'Light Room' CD package. Steve had it all worked out of course, so here's my interpretation of how to animate your own high-class ripple effect.

Good form

The secret is to use Forms, those often misunderstood objects which Imagine has always offered and few have ever bothered to use. Forms make creating symmetrical objects such as a rippling pond very simple, and the final effect is considerably better and more controllable than any Special Effect option. So roll up your sleeves, create a new project and let's get started.

Step 1

Go to the Forms editor, and create a new object. The default settings will suffice, but increase the number of



points and slices. The larger the numbers, the smoother the final result – although extra memory and rendering time will be required.

Step 3

Yes, it's a sphere, but we can soon change that to something more useful. Switch the Summary to 90 Degrees from the menu or button, as this will allow us to make the maximum number of changes with the minimum amount of effort.

Step 4

Now drag all the points flat. You'll

notice that you only need to drag one side, in one window view. Watch how the perspective view changes to become a flat disk. The main object doesn't need to be perfectly flat.

Step 5

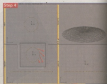
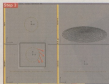
What we are actually doing is creating several 'keyframes' for the ripple motion. We can then let Imagine work out the in-betweens using its ability to morph between states. Select 'Save' and store the flat object under the name 'pond'.

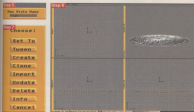
Step 6

Now go to the Detail Editor, and reload the pond object. Here's the important part: click the object, and open the States window from the States menu. Select the Copy option and enter a new name such as 'flat'. Save the object again – don't worry about overwriting it.

Step 7

Go back to the Forms Editor, and reload the pond. Put the symmetry mode back to 90 Degrees, and now we are ready to model our splash.





Start with a very simple experiment in the comfort of your living room.

Step 7
Save the object again. Don't worry about overwriting it; return to the Text Editor, re-load the object.

highlighted in several species occurring near
Bates, called 'moss'. Bates then collected

Step 8
Repeat from Step 6, adjusting the ripples a little bit each time. You don't need to go overboard on the detail, and about half a dozen Straps should suffice. End up with a pond which has a smallish ripple right on its surface.

Step 8
Finally, in the detail editor, assign a material to the panel. It's easiest to be voted, so make it blue, reflective and slightly transparent. Skip transparency if you want a more realistic

[illegible]

A dream in the Desert



Several skills from the rising-pool activities, combined with the "Four-Step" Method technique.

Step 11

In the Action Editor, set the number of frames to something higher than one – try fifty or sixty to start with. Now we need to make imagine morph between the various pond states. If you click on the pond's Action bar you'll notice a setting for State; this is the bar we'll change.

Step 12

Drag the pond's Action bar into several segments, by adjusting the end frame of the first bar and then adding new segments. For each, alter the State setting to reflect the top 1, top2 and so on. Imagine will morph the pond between them.

Step 13

Create a new sub-project file, clear some disk space and start rendering! This animation might take a

Step 11

while, so try a wireframe preview to make sure the apple effect is working the way you expected. You may want an object to fall in the pond to cause the ripple in the first place.

Step 14**Step 14**

If you are feeling a little adventurous, apply multiple ponds to a flat plane of water. Offset the morphing actions for each ripple by a few

frames and hey presto! You have an instant rain storm.

Just perfect for modelling the typical British summer. ■
John Kennedy

Speeding up rendering time

Look at these two images. The one without the pond was rendered in 4 minutes 15 seconds, the other in 23 seconds. Imagine that time difference extended over a one hundred frame animation and suddenly those seconds become very valuable indeed.

The trick is to make use of a pre-rendered image, and use it as the backdrop. Of course, in an ideal world, we would love to be able to perform a full ray-trace with shadows of every scene. There is no doubt that rendering the pond scene with all the landscape and trees present will give better results, as the trees are reflected properly in the water.

However, present day hardware isn't quite up to that speed yet. So instead I rendered the scene once, with full ray-trace shadows, but with no pond present. This scene was then used as a backdrop for the clay frame point animation. The background brush must be the same size as the image to be rendered, and it is set in the Action Editor's Global setting.

This time there was no need for a full ray-trace, as no scene rendering was used. This means that each frame in the animation

rendered in seconds –

If I had kept the objects and ray-tracing mode, the total animation would have taken many hours, and would've looked almost identical.

Cheating? You bet, that's just what image rendering is all about. If you can get the same effect in a fraction of the time, do it. Sometimes you simply can't supply all the details in the backdrop, if one of the trees was overhanging the pond, it should be included. However, the backdrop could still be used and it could include the other tree and their shadows.

You may be wondering about background detail – if you render a reflective sphere for example, you need something which is reflected as though it was visible in the foreground, behind the camera. However, there is a way around this too.

Here is another example pair of images. One was rendered



▲ Using the global brush setting, foreground reflections can be taken care of too.



▲ Here are two images: one with a global brush, and one with a global and backdrop brush. When dealing with clay objects, don't forget the global!

using all the objects and details, and it took 3 minutes, 11 seconds. The other has been rendered on an 'empty set', with only the object, camera and light-source present. This render took only 1 minute 36 seconds. The foreground image was supplied to the Global Brush. The cameras are warped slightly more in the second image, but adjusting the size of the global brush would solve that problem instantly.

Of course, for once-only still images this technique gains nothing: you still need to add on the time taken to render the backdrop (in this case, it took 4 minutes, longer due to the extra detail in the camera). However, as

part of an animation the time taken for the once-only backdrop becomes pretty negligible.

You can use these two backdrops for special effects. For example, when rendering a shiny logo for a TV company, switch on the global brush but ignore the backdrop. This causes detail to be included in the reflections, even though the background is a plain or graduated colour.

Remember too that you can animate the backdrops, and that makes it possible to create all kinds of special effects such as moving clouds or even animated stuffballs. You can even use frames which have just been rendered as the backdrop, creating a kind of recursion effect.



▲ Taking the image using a pre-rendered backdrop can save minutes in every frame rendered.

Amiga C Programming

PART 3

Our C Programming series progresses to making gadgets this month, with the help of GadTools.

We're going to follow up last month's skills and spills with the mouse by looking at how to create some gadgets and interact with them. In particular, we're going to look at using some functions from the GadTools library. Along the way, as ever, we'll be examining some of the more interesting bits of C.

New technology

The first example on the code disk is "gadgets.c". This builds on the first example of last month, so most of the code is familiar.

The new bits are the (by now) obvious setting up of the GadTools library, the insertion of error reporting (using "printf"), declared in the "stdio.h" header file for when things fail, and the replacement of the window opening code by a call to the function "setupWindow()" which is where the meat of the example starts. To support the new stuff we've also had to add the prototypes of our new functions and make some constant definitions (the bits using "define"). We will be looking at these constants shortly, but first of all we'll take an overview of the new code.

The function "setupWindow()" does almost all the new stuff concerning adding a GadTools gadget to a window. The basic structure is:

- 1) Get a handle for the screen on which our window will appear, using "GetMainScreen()", matched with "UnlockPutScreen()".

- 2) Extract the visual information from the screen, using "GetVisualInfo()", matched with "FreeVisualInfo()".

- 3) Create a new list of gadgets, using "CreateContext()", matched with "FreeGadgets()".

- 4) Create and add a gadget to this list by using "CreateGadget()", but with the framing done by the "FreeGadgets()" which was used in

the previous step.

- 5) Open the window to use this list of gadgets.

The first and second steps (getting the screen's visual information) are necessary so that GadTools can render its gadgets in an appropriate way. The main issue here is working out the correct pairs to render the 3D look.

The last step (opening the window) is actually done by the function "createWindow()" which is very similar to the code we used last month, as we'll see. Once the window has been opened there are new messages to handle (generated when the user interacts with the gadget), so "handleEVENT()" has also been updated.

Inspect a gadget

Coming down to the first gadget now, the most interesting part is the code creates a new button gadget. We fill in a "NewGadget" structure (as shown below, for the variable "newgad") and pass this to the "CreateGadget()" function. (The "NewGadget" structure is defined in the header file "gadtools.h".)

(See example 1)

Most of the data used to describe the gadget is taken from the constants defined at the top of the file using "define". These are the magic like "MYGAD_LEFT" and "MYGAD_TEXT". The other bits are the interesting parts, the first is the use of "offset" and "offset". These are needed because the gadget position is specified relative to the window's parameters, not relative to the inside of its borders.

Likely, we don't need to have a window open to calculate how big its borders are, so we can get this information from the screen on which it will open. Hence, "offset" and "offset" are initialised like this:

(See example 1)

The value for "offset" is nice and



▲ Key bits in a well-rendered world

simple: it's the size of the left borders for all windows (both borders that open on this screen). The value for "offset" is a little more complicated. It has to take into account the height of the title bar which will be obtained by the size of the screen font. You can place this calculation as a standard idiom.

Topaz or not Topaz

The last point of interest is the setting of the font that the gadget will use. The standard "Topaz" font has been chosen, mainly so that this example will work for everyone. To define the font, we've initialised a "font" structure (the "topazfont" variable). Once we've done this, we use a pointer to this data for the gadget's "mg_font" by specifying "topazfont" as the value.

(See example 1)

The fonts are fairly obvious, except maybe the last two. The "is_3d" is whether the font is to be embossed, bevelled or underlined. Two hints we've just the plain font. You can find flags for specifying styles in the standard include file "graphics.h". They're the constants that begin with "F3D_". The "is_Plags" specify some more miscellaneous details about the font and should usually be left as zero.

There's a subtle simplification here: we know the Topaz font exists on all Amigas, so we know the gad-

get will be able to use this font, if we'd specified something like "TOPZfont" then we couldn't guarantee the font would be available or directly usable. In this case we'd need to augment our code to include an "OpenFont()" and "CloseFont()". We'll come back to this in a later tutorial.

If we specified the gadget's "mg_font" to be "NULL" (that's the default font (i.e. the screen font) would then have to be used for the gadget. We would then have to make all our gadget sizes (and positional dependent on the size of the font since the screen could be using any font. This is known as "font sensitivity" and, as you can imagine, it's often a difficult task to do properly. For this tutorial, we'll stick to using the Topaz font so we can guarantee it will work nicely on all machines.

Making gadgets

As long as, the most important bit, the creation of a GadTools gadget using the "CreateGadget()" function.

Notice that we need to pass a pointer to the "NewGadget" data we created, so we specify "newgad" as the third argument, and not "newgad" (which would totally cause a compiler error with thanks to C's strong typing).

(See example 1)

The result of the "CreateContext()" call, "gad", is

Macros

The keyword `#define` is used to define a macro. In the first example program, `"MPGAD_LEFT"` is defined to be a macro that evaluates to the number 18, or more precisely the text "18". Whereas `"MPGAD_LEFT"` others it will be replaced (expanded) by "18".

So, why use a macro/constant? Why not write in "18" directly instead of going to all this trouble? Well, the benefit is that you can group these constant definitions together in an easy-to-find place (like the top of the file, rather than having to hunt for the places where the values are used). And, if the same (global) value is used in several places, then you only need to change one line (the macro definition) to change all occurrences of the value. Plus, it gives a readable name to a value, and this is a vital aid to documenting your code and making it easier to understand (for others, and for yourself at a later date).

However, there are some well-known pitfalls in using macros. The biggest one is that use of a macro will be replaced by its definition at *every* place before the compiler tries to understand the text. You can do some great tricks whilst using this feature, but normally it's something to be avoided. The approach we've used is to define our macros to be values in parentheses, ensuring that the textual substitution will unambiguously yield either the value we wanted or cause a compiler error. A good introductory C text book will explain this in more detail, if you're interested.

specified as an argument to `"CreateGadget"` and used to hold the result.

This links together the gadgets we create and it makes the code for making several gadgets nice and simple (as we will see). The actual list of gadgets that the window must use is now stored in `"glist"`, the address of which was originally passed to `"CreateContext"`.

Gadget window

The function `"CreateGadgetWin"` contains code that will probably be pretty familiar to you.

The significant differences you will see are: the addition of `"BUT_TODCMP"` to enable us to hear messages from the button gadget; and `"TODCMP_BUTTONWINDOW"` is equivalent of using `GadgetList` in the `"WA_TODCMP"` tag, the use of the `"WA_Gadget"` tag (specifying the gadget for we created as the tag data), and the `"OT_ButtonWindow"` call after the window has been opened.

The `"handleDCMP"` function is very subtly different: it must now use `"OT_GetMagi"` and `"OT_SetMagi"` instead of `"GadgetList"` and `"ReplyMagi"`. This brings a new advantage: the result of `"OT_GetMagi"` is a `"struct buttonMessage"` rather than just a `"struct Message"` as we can take some of the clutter of doing ports. The rest of the code is unchanged, except that we prevent drawing over the gadget by checking the mouse's `x` position. Plus, the `"TODCMP_BUTTONWINDOW"` mes-

sage must be handled (the code is another place), and we can set an button process (the `"TODCMP_GADGETUP"` message). We'll make the button press change the colour we use for drawing to the next pen. Try out the example to see exactly what will happen.

The same program

The next example, `"gadget2.c"` (can you spot the trend?), is identical in function to `"gadget1.c"`. The differences are:

- 1) A different style of opening libraries is used. The opening and closing are separated into different functions, and this can be done because the library base variables are global (and initialised to `"NULL"` in their declarations).
- 2) A small number of textual optimisations can be made: `"glist"` can be initialised in its declaration and so can `"toposPen"` (although such structure initialisations should be used only when dealing with small and simple structures).
- 3) The results of `"CreateContext"` and `"CreateGadget"` don't really have to be checked until the last `"CreateGadget"`, since that will fail (i.e., return `"NULL"`) if `"gad"` is `"NULL"`, and all successful allocations will be deallocated on message by the `"handleGadget"` call. This can help you to simplify things when creating several gadgets.
- 4) A variation on the `"gadget2.c"`, looking the trend! uses macros for the attempts to open a library, although it is fairly safe to say that you can continue

Code examples

Example 1

```
#include <beosGadget.h>
/* Setup our first gadget */
#define gad_Window = WindowPort()
#define gad_Window = gad_Window
#define gad_LeftEdge = MYGAD_LEFT + 100
#define gad_TopEdge = MYGAD_TOP + 100
#define gad_Width = MYGAD_WIDTH
#define gad_Height = MYGAD_HEIGHT
#define gad_GadgetFont = MYGAD_FONT
#define gad_GadgetList = MYGAD_LIST
#define gad_Flags = 0;
```

Example 2

```
int gad_Top, gad_Left;
/* The offsets of our window borders */
#define gad_Top = 100 - MYGAD_Top;
#define gad_Left = 100 - MYGAD_Left;
```

Example 3

```
#include <beosGadget.h>
/* Setup our description for the topos font */
#define gad_Topos = "topos_font"
#define gad_Topos = 0
#define gad_Topos = 0
#define gad_Topos = 0
```

Example 4

```
/* Now create it and add it to our list */
if (gad = CreateGadget(MYGAD_FONT, gad, gad, gad, gad, gad))
    CreateWindow(gad);
else
    printf("Error: could create gadget\n");
```

Example 5

```
/* When you reached the end of the palette gadget's colour */
pen = (pen+1) % (2+MYGAD_COLORS);
```

right on ahead and ignore it.

Small friend (palette)

The next example, `"gadget2.c"`, creates a palette gadget next to the button, so you can now pick a pen colour directly. This shows how it's just the last call to `"CreateGadget"` that's important, in terms of checking errors.

The interesting bits of this example are the way the gadget tag, `"Colour"`, is used as a label, the simplification of tags to describe various attributes the palette gadget should have, and the way we can decide which gadget generated an `"TODCMP_GADGETUP"` message (in `"handleDCMP"`). There's also a trick using `"C++"` to introduce a new scope within a `"case"` so that the gadget pointer `"gad"` is as local to the code that uses it as possible.

The next example, `"gadget3.c"`, provides the final polish. We remember the result of `"CreateGadget"`

for the palette gadget in a global variable, and use this to update the palette gadget's selection when the user clicks the button.

A subtlety is that now we must limit the `"pen"` variable to the range of the palette gadget when it is incremented, so we therefore use the modulus operator, `"%",` and the bitwise operator, `"&"` for calculating the number of colours from the palette depth.

See example 5

The code to update the palette gadget uses `"OT_SetGadgetData"` with a short tag list to specify the attribute that we're changing (`"GPIPA_Color"`), the selected colour.

There should be plenty here to play with. You could even try making other kinds of gadgets, by taking a look at the `"BorrowGadgets.h"` header file and see what you can discover. I'll be seeing you next month then! ■

Joan Holmes



Net God speaks

There's a fresh trend appearing increasingly from Net software authors of late. That is to implement cutting edge features in order just to be the "first". I'm not entirely convinced of their apparent logic here. In reality no other user of another platform could care less if some Amiga program does 'x' for example, and their 'big' application doesn't.

Of more pressing need for us are the basic features that we still have lacking. Javascript in web browsers is a classic example. None of the three big boys deems that this aspect is important despite the fact that it's the single greatest missing feature that stops us from using web pages just as they'd be used on Netscape.

I'm not saying it's easy or that it's not abused on the Net but this has never been a valid argument for not having the feature in the first place. The same argument was thrashed out with Prothes when CU Online adopted their use.

I can think of a million really cool things Amiga users could do on their web sites with Javascript. Do we need HTML 4.0 to be the first?

Surely authors should be addressing the areas of the biggest impact on what it is we want to do, right here and right now.

Surf's Up!

This month we discover a Worldwide weather monitoring service, a networkable free Civilization clone...



Weather Experience 1.5 released

Weather Experience is a small Net client that allows monitoring of weather conditions throughout the world. It relies on the information available at a few core US based services so, unsurprisingly, all of the best information is on American cities and regions. However, there is at least temperatures, general conditions and local time available for a host of cities around the world.

The client is extremely easy to set up to display your chosen locations and the specific fields you want to view. You can find Weather Experience 1.5 in the Online directory on this month's CD32 or you can obtain it from <http://the.amiga.com/pub/usa/>

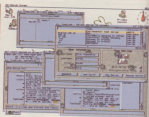
Amiga made 68k everywhere! HQ!

The main Amiga archive at <http://www.amiga.org/~amiga> and the.amiga.org has been plagued by outages recently. The most recent reasons given involve hard drives becoming a RAID, very big hard drive array flapping up. The mirrors still continue to work but of course they won't be updated with new uploads until the main archive is rebuilt without major issues.

We contacted Brian Hudson, Amiga's maintainer, to ask him what the story is. It seems 'eventually', the machine that the main Amiga site is hosted on, listed as T006 RAID and is being upgraded to 1TB60. The question is, how much space is freed if Brian starts up the touted multiple archive and moves Amiga stuff to there.

Free Civ client MindLink

Believe it or not, some people still count MUI as a disadvantage when running Net software. Those people have been a little out of touch with



IRC software since Grepvina's development fell into disrepair some time ago. Rescue is apparently coming in the form of MindLink, a new ClassAct based IRC client.

Direct comparisons will be drawn against the Amiga's MUI-based brilliant IRC client, AmIRC. MindLink claims to address the messy multi-window nature of AmIRC and it will be possible to run multiple windows.

There was no public beta version out so we went to public but check <http://spainwide.math.sph.gs/maek/p/MindLink.html> as there might be by the time you read this.

FreeCiv on the Amiga!

University students Chait play FreeCiv, a free civilization clone for Unix machines with up to 16 people able to play at once. Planning a server is simplicity itself. Recently the Norwegian Trolls Waisted Hansen ported FreeCiv to the Amiga. It can be found on the Amiga in the path [comp/games/freeciv1.0.0a](http://www.amiga.com/pub/usa/comp/games/freeciv1.0.0a). The game is presented in a MUI interface and requires a 640 345k database to be installed also. FreeCiv is becoming very popular - there's an IRC channel called #freeciv on the new Amiga IRC network, <http://www.amiga.com/~irc> so drop in and join playing! ■





Surf of the Month

This month CU's Net man, **Mat Bettinson**, does the Web surfing thing. Like he doesn't anyway...

Hey this is neat, I've never done a Surf of the Month before, so let's start from the beginning. First off, we need to buy an Amiga. Sound good? Right, well let's cruise over to **MicroMart**, the UK's free advert magazine, which has lots and lots of cheap Amiga hardware for sale. Trying the hardware for sale section, I found an A2000 68030 Model 1040s of RAM and 200Mb hard drive for £306.

Can't complete about that I thought I'd put in an ad for a Vc28 too, maybe someone will buy it. Free adverts go on the web site and the printed weekly which is a great way to offload some computer products for cash. It really is a great

magazine with a great web site to accompany it.

OK, now we've got an Amiga, let's go check out some modems to go with it of course. Good old **US Robotics** aren't limited to the US at all, lucky. There's a good USR site also which is good news since the modems are country specific. The hot news is the 56K modems at the moment, of course. USR's X2 modems offer 56K if you buy a new one, or you might have a USR Sportster Flash modem. The latest code to make the modems X2 compatible for the UK can be found there. Naturally this works with Winmodem, the UK's only Amiga sport is provided.

Well better get a some high speed serial for this. Right now X2 modems. Well better place to look than **HiSoft's** excellent web site? It's a bit of a graphic overload but somewhere on there is the Whisper PCMCIA high speed serial port. Holy cow, we can even buy it online. This is pretty high tech stuff and there's lots more products to check out too,



▲ Hey look, lots of lovely designs for sale across land on MicroMart's home page.

like the excellent Browse web browser and CD writer bundles.

What we need now is some nice software to use on our kids last Amiga Internet machine. For that, we'd best haul over to the **NetConnect** home page. This is the support site for the Net software package called NetConnect. You may remember we co-contributed NetConnect. Live on the NetConnect Winmodem connection offer. We this page you can find out about new versions, buy the full version and get on the NetConnect mailing list. Happy boy!

Now that we're online and we have all the best hardware and software, I suppose we need one of those 'special' sites. I've always fancied a picture of **Sarah Cox** (from Channel 4's, 'Girls Show'). Actually I've always fancied Sarah Cox full stop. A search in Alta Vista for Sara Cox turns up a site promising lots of

Those sites in full

MicroMart
<http://www.micromart.com.uk>
US Robotics UK
<http://www.usr.com.uk>
HiSoft
<http://www.hisoft.com.uk>
NetConnect
<http://www.netconnect.co.uk>
Sarah Cox (for real)
<http://www.sarah-cox.com>

pictures of her and other celebrities. Shamelessly it's a fake and actually a plug for a UK comedy web site called 'Come U Crag'.

It is a great place to discover by accident, and the ensuing laughter made me forget Ms Cox. Just as well really. ■
Mat Bettinson



▲ The NetConnect support site has information and updates.



▲ HiSoft's graphics heavy web page allows you to buy from their range of products online.



▲ HiSoft's UK web page has the Flash HiSoft upgrade to turn Explorer and Sportster into X2 units.

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Sound Lab

First steps with Project XG and OctaMED SoundStudio.

Moving onto using MIDI instruments from within OctaMED is easier than you might think...

OctaMED SoundStudio is unique in the way it combines powerful Amiga sample-based tracker features together with MIDI sequencing. The MIDI side of things is quite often overlooked, but it is this which gives SoundStudio the ability to transcend the limitations of your internal audio hardware.

Unlike dedicated MIDI sequencers, SoundStudio gives audio control over Amiga samples as well as the ability to control an entire MIDI studio. If you've invested years in getting the best from purely sample-based trackers, opening up to embrace MIDI equipment will come as a breath of fresh air. In most situations, the best way to expand into

the world of MIDI is with a multi-instrument sound module, one that offers a range of different sounds, preferably with built-in drum kits and options to add reverb and other effects.

If you don't intend to go all the way and build a complete studio, our DIY Project XG from the September issue is just perfect. This offers, all of the above and more, requires no MIDI interface, no mixer and even combines your Amiga's audio output with its own to give a single stereo signal that can be channelled straight into your file.

Since OctaMED and SoundStudio allow you to enter notes from the Amiga's keyboard, you could also consider adding a MIDI module instead. This is a MIDI instrument with no keyboard of its own, which helps keep the price down.

Your first instrument

Whether you take the Project XG route or get hold of a standard MIDI instrument, the basic concepts of integrating your new gear with SoundStudio are the same. Basic control of a MIDI instrument from SoundStudio is simple. First turn on the MIDI features by selecting MIDI Active from the MIDI menu. Click on the Props button from the Main Control panel. Next, enter a name for the instrument in the Name box, such as "MIDI Test" for example.

Now move the MIDIChn and Preset sliders to select which sound you want to assign to this instrument



▲ With Project XG and SoundStudio, you're got an entire virtual studio that fits on your desktop.



then, and which MIDI channel you want it to use (it's best to give each instrument its own MIDI channel, but not essential).

Your MIDI instrument's manual should have a reference section for you to match actual sounds with Preset numbers. Project XG users should refer to the charts starting on page 12 of the OMMX3 manual. While we're at this stage, it's well worth remembering that most MIDI systems like to use MIDI channel 10 for drums, although this isn't always the case.

Now try playing a riff on the Amiga keyboard to see if it's all working. If it is, you'll hear your MIDI instrument playing the notes you pressed. You can now go and set up more MIDI sounds in the remaining instrument slots. Remember, you can use up to 64 tracks of MIDI data now!

MIDI commands

Well that's the easy bit over with. The next thing is to take a look at the MIDI specific commands. These generally work like the standard player commands, but send MIDI data instead. Many of the normal player commands will also work with MIDI instruments. By taking a look at the online help, to see which ones work with MIDI and which ones don't. In many cases you'll find your MIDI instrument has features which aren't directly supported by the player commands. It's here where things can get a little bit on the sticky and technical side, but once you've got the hang of driving your own particular gear, you needn't go through the process too often. Take a good look at the User definable commands panel for a guide to customizing your own commands. ■

Tony Horgan

MIDI commands

For easy reference, here's a list of all the MIDI specific player commands available from SoundStudio. Many of the standard commands also work on MIDI instruments.

- 01 and 10 Set pitchbender (use signed hex)
- 04 Modulation wheel (000-FFF)
- 08 Set hold only
- 0A Polyphonic aftertouch
- 0C Set volume
- 0D Channel pressure
- 0E Pan control
- 10 Send MIDI message (message no. -1)
- 11 Set volume controller
- 1C Change MIDI preset
- 21-2F Set MIDI assigned MIDI controller

Please remember that the full SoundStudio manual is on this month's cover CD, so do check it out for further details.

Desktop Publishing

Professional Page 4.1



It's Pro Page time again. This month we're going to be discussing how the Genie tool works and how Pro Page uses ARexx.

One of the most under used functions in Pro Page is the Genie tool. It seems that a few Pro Page users don't fully understand what the tool is and therefore never get to see the real benefits provided. This month, I'm going to explain a bit about Genie in the hope that this tool is better understood, and used to its full potential.

A Genie is simply an ARexx script. Perry is written about ARexx in books and magazines, so I won't try re-inventing the wheel by giving an ARexx lecture. What I will show you is how Pro Page takes advantage of ARexx, as well as giving you a head start by showing how simple it is to write your own Genies.

First things first

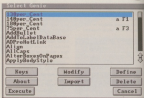
Before you can make use of the Genies in Pro Page, you will first

need to install a vital part of the Genies system that didn't make it onto the CD (Anige cover disk and/or CD).

Those who have the CD edition of this mag will find the relevant parts in the Magazine drawer. Follow the documentation on the CD to perform the installation. A Genies disk is also available free when you buy a Pro Page manual or a package called Genies heaven from LH Publishing. This package also includes a booklet containing the ARexx commands used by Pro Page to help you create your own Genies.

To install new Genies, all you need to do is to copy them to where ever PROX is assigned. This will default to the S: directory of your System, so put them there unless you have made your own PROX assign.

The next important point is to



▲ The Genie tool is a neat feature of Pro Page that can make light work of heavy tasks.

make sure that ARexxman! has been run from your User-startup or Startup-sequence. You can test this out by opening a Shell window and entering Status, Please!

This shows a list of processes that are currently running and ARexxman! will be listed if it has been started. If it doesn't show up, you can start it manually by double clicking the ARexxman! icon in the Workbench system's drawer. Drag this icon into the 88888 startup drawer to have it launched automatically during boot-up.

Dreaming of Genie

In the years I have been using Pro Page, I've been able to benefit from many types of Genies including fairly simple ones that let me tell Pro Page that I want to view a whole page or the full width of a page on the screen.

Other Genies let me apply Style tags (see last month's issue) to

selected text using the keyboard, making the job of formatting text as much easier than the applying of tags manually.

One Genie divides a text box into columns of equal width while leaving the text flow between the lines. Another scales a bitmap image so it completely fills a box. Also there's a Genie to the same of Deletetext which lets me delete a selected range of pages.

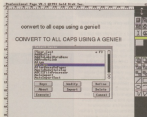
Even more useful is 'Copy box to Pages' which will allow me to select a box and have the program copy that box to a range of pages -- add, even or both!

How do they do that?

On the most simplistic level, a Genie is merely another way of communicating with Pro Page.

Instead of using a keyboard shortcut or a menu item, genies enable you to talk to the ARexx commands built into Pro Page in a way that is more 'user friendly' by than any other program I've laid eyes on either before or after Pro Page was released.

To see what I mean, you need to look at the Genie tool. When you click on the Genie icon (under MISC), a panel appears on your screen. This panel has many buttons which will enable you to do various things with Genies. The button I like to use



▲ Genies can be used to convert lower case text to upper case. This can be made even easier by assigning a keyboard shortcut to such a Genie.



▲ Another 'how-to' Genie is one of those favorite Genies and is a must for those of you with a PostScript printer.



▲ 'Water Column' lets you take a box of text and convert it to two columns, along with a few styling text tricks.



▲ This is one of the more elaborate features which creates a bar chart including the labels for the values like and places.



▲ Here's a Genie that appears on your text by showing the screen and the vertical position of the letters.

most is Keys. This lets you assign a key stroke to a Genie, using either a Shift+Function key or more simply, an Alt-Function key combination.

This gives opportunity to create up to twenty Genies with keyboard shortcuts for them. Click on the Keys button, and then press the keys that you intend to associate with the selected Genie, such as Alt-F1 or Alt-F2.

Below the Keys button is Abort and this is a truly unique feature

where Pro Page lets you what the selected script does. It does this by taking the command from within the script and displaying it in a window. This is so cool, I wish every Affix capable Amiga program had it.

At the bottom of the panel is a button labelled Abort. This is the one you click on to run a selected script. Moving to the middle of the panel, the top button labelled Abort is used to change a script. Click on it and you will find a new screen appearing which is the editor for Pro Page Genies.

Import is a button which enables you to import a Genie into Pro Page that is not in the drawer assigned to Pass. This lets you make use of Genies created while you're in the middle of working on a document. In other words, it's not necessary for you to shut down and start again

when using a new Genie that wasn't in the Pass drawer when you first started Pro Page.

On the right of the panel are three other buttons: Cancel, Delete and Define. Note that Delete not only removes a script from the window, but removes that script from disk. The final button, Define, is used to create new Genies of your own.

Write your own

To create your own Genie, click on the Define button. You'll be faced with a blank page in the Genie editor. Now look at the sample screenshot for ApplyStyleStyle (below).

On the first line there are two symbols (" " and " ") which are there to say that the following text is merely a comment to explain to the user what the Genie does. In other words, to tell Pro Page to ignore this bit of the script. The text used in this first comment is also displayed when you select the Genie and click on the About button.

To and the comment, the same two symbols are used but in reverse order (" "). As you can see, this Genie only has one command line. In this case the command calls the Style tag 'Body' and applies it to selected text. The format of the command is 'set StyleTagBody'.

For this to work, there first needs

A few commands...

To get you started, here are a few commands that you can try using in your own Genies.

ca[3] (Set[1])
Boxes as selecting Project Menu

ca[3] (Set[1])
Place a figure within the brackets, such as 100 to achieve 100% magnification of the page. Try using this to create Genies that will let you view a full page or full width of a page.

ca[3] (Set[1])
Insert the name of a colour from the current Colour list. Remember to make sure of your spelling - there is no V in color.

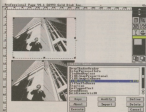
ca[3] (Set[1])
Insert the required font name between brackets.

to be a Style tag called Body. As you've deduced, the name of the style tag is the word inserted between the brackets, and the Pro Page Affix command is 'SetStyleTag'.

This is just one of more than 300 commands in Pro Page. The word Call is simply a piece of text that not only precedes the command but is recognised by Pro Page as a 'call' to carry out that command. Once the text and commands have been entered, choose Save As from the Project menu. A requester will appear on Pro Page's screen asking you to name the script as you would so wish.

After it's been saved, go back to the editor and choose Return. You'll be asked to name the script. This also saves the file to disk again, meaning you didn't need to use Save As earlier, but when working on long and involved scripts, it is always best to save your work in case of any crashes etc.

Once the script is named, assign it to a key press, and then think about the many other Genies that you could be creating to next month's issue we'll be looking at text entry using Pro Page's Article Editor. It can be used for many things from creating text for your page to editing your Userstatus. **Larry Hickmott**



▲ When you import a picture it doesn't always fill the box you have created, but with the help of a Genie it can be made to do this - saving a lot of time and work.

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Q&A

No matter what the level of your technical problems, if you put them to our experts they'll try their best to fathom things out. Also, please remember to provide us with as many details on your systems and problems as possible, to help us in helping you.

Logos

Mysteries and messages ...



Solutions to those everyday troubles with your Workbench.



If you need help getting more from your Amiga, just ask!



All your Internet and general common problems swiftly solved.



Trouble making your Amiga sing? We've got the answers here.



Technical matters beyond the scope of plug-ins and plug-ins.



Answers to queries on particular pieces of software.



General queries which just don't seem to fit in anywhere else.



Specific help with CD-ROM solutions and drive problems.



Problems with art and design? Help and advice is at hand.



Printers, monitors, we'll solve your peripheral woes for you.

Printer problems



Please can you help me with my Citizen ABC printer? Whenever I try to print anything the characters A/P/W/T/R/S/O are printed and the paper is ejected. I have tried several ways of cutting this problem, eg. different drivers, different parallel cable, print manager programs, and even a different printer.

Sometimes during these attempts the printer suddenly stops fine and keeps on waiting for the rest of the session, but the next time I use the printer the problem returns, even after trying the cure that appeared to work. I have even tried the `Shift` command `copy >PAR`, but the characters typed on the keyboard do not appear correctly on the printout. It would be grateful if you could solve this problem.

Alan Piles, Swindon

As you say you have changed the cable, printer and software with no effect, the logical conclusion would be that your computer is at fault. The symptoms that you describe could well be a dodgy parallel port, but one thing makes us a little suspicious.

The fact that when it starts working it stays working until the end of the session indicates that this may well be a setup issue after all. The string of characters is a characteristic of a printer being sent foreign control codes. One possible explanation is that when it starts working you are getting something right by trial and error and not seeing it. Make sure next time it starts working you save all your printer profiles!

A bit of a shot in the dark this, but we do believe that the Citizen ABC has a miniature DIP switch setting inside which allows you to select between IBM Proprinter and Epson control codes. Make sure that your printer driver and your

DIP switch settings tally up.

Scalied installer



After successfully building a tower system following your excellent "Build Your Own Tower" article in the April issue of CU Amiga, I used AMR Plug 'n Play to get my CD-ROM working. After extracting I went to install and got the message "Unable to open the root installer".

Do I have to replace my OS chip or order a new set of Workbench disks (as I believe more to be the case)? Please advise, I desperately want to use my CD-ROM drive.

Michael Ward, Wiltshire

Unless you have some other reason for thinking that your Workbench disks might be corrupted, then you are OK. A word to the wise - back up your Workbench disks immediately. Go on, do it right now.

As to your query, it sounds like you simply do not have a copy of

installer - or possibly have a very old one - in your CD directory. Grab one from a recent CU cover disk and copy it into C: and all should be OK!

Hardware hacks



1. I have an A1200 with an IDE hard drive, 4MB trapdoor expansion and a SCSI CD-ROM drive, and I am currently modifying my Amiga housing to suit my needs. I am using an ASBO power supply and moving the motherboard into another unit but to do this I need to cut another keyboard. I have an A2000 keyboard with a 5 pin DIN plug at the end. Could you tell me if it's possible to wire it to my A1200 and if so how, what parts I would need and where I can get them from?

2. Could you also tell me if it is possible to wire up an internal A2000 floppy disk drive as an external one for my A1200. If so can you show me a wiring diagram?

E. Robinson, Hull

1. When you say you are moving the motherboard into another unit, I guess you are talking about a tower case, so you really ought to look at the DTV tower articles we ran in the April, May and June issues. For the keyboard question, see this month's Tech Tip on page 98.

2. It's possible, but you'd have to construct a custom designed 25 pin D-type to 34-way IDC plus power connector, which requires lots of fiddly wiring and soldering. You'd also then have to find a case and figure out some type of blanking plate, plus some way of hold-



ing the eject button in place.

I think you'll save yourself a day's work by using an external drive, and it will probably cost about as much as the DIY version.

The boot don't fit



I have an Amiga A1200 with a hard drive and a SCSI upgrade. Up until now it has always booted from the Workbench screen, but now it only boots with the DOS screen. Can you tell me how to get the Workbench screen to boot instead of the DOS screen?

Hi Hall, Edmenton

What's happened is that your computer is no longer running the entirety of its startup-sequence file. This is a text file found in the *h:* directory of your hard drive which gives the computer a list of commands to do every time it boots up. Just about the last thing that is likely to be in your startup-sequence are the lines:

```
LoadLib
BootLib
```

These lines, logically enough, load Workbench, and then the CU (DOS) shell that you get on start up. If you type these lines in when you boot up into DOS, you should then find that Workbench will appear.

Two things may have gone wrong with your startup-sequence. Firstly, it might have been deleted, or secondly it might have called on some piece of software which you have recently deleted and it's getting stuck at that point. If the latter is the case, an error message will appear on the DOS screen. Either situation can be rectified by replacing your startup-sequence with the original one from your Workbench floppy. Boot up to that troublesome DOS prompt, click the Workbench disk in and type `copy d0:1 startup-sequence file again`.

Of course if you have customised your startup-sequence in any way you will lose the customisation. You could try editing your startup-sequence and removing the line which any error messages suggest is at fault.

Where's the cards?



Referring to your recent article on zero slots and sound cards:

I rushed out and bought a Zero bus board and then went on to phone Microsystem and Attech's

Computer Technik. God knows what my phone bill will be like! So: Microsystem no longer make the Tascam sound card. In fact they have stopped support for the Amiga completely. Attech's Computer Technik can sell me the Prelude, but it will not work with DataMED, as it is apparently a 'dead' product. I have also had a highly offensive letter from RBF Software about their opinion of Amiga users, so no help there. As I have to use the A-H driver for it, I would consider Petasoft's Delta, if it is my last option, but I cannot find the phone number.

So CU Amiga, please help me. I have a ZeroII or Amiga, and I300 more than burning a hole in my pocket. Can you suggest any options? Can you give me a contact for any sound card manufacturers? If all this fails are there any trackers which will work where the 'dead' OctaMED fails? Please help me here. I am desperate to fill one of my Zero slots with a sound card, any sound card. Microsystem suggested trying the second hand market for a Tascam, but wouldn't that be just as difficult?

Justin Tapp, Norfolk

We reviewed Delta in the November 1998 issue of CU Amiga, so dig that out if you need major info on it. For now, here are the contact details for its suppliers: Petasoft, Fax: 00 358 5 452 1047 or 00 358 5 491 5223. E-mail: petasoft@petasoft.fi. They don't list a phone number. If you are still after a Tascam you could try White Knight Technology on 01630 822 121. Tascam was reviewed in the April 98 issue of CU Amiga. Tracking down a second hand Tascam could prove difficult as they were never presented to any great degree in the UK but it's well worth looking. The third option is to locate a MasterPro card, which also came from Microsystem.

Zip Vs CD-ROM



I need some advice regarding storage. Up until recently I was fairly set on purchasing an 8 speed CD-ROM drive as the next peripheral for my Amiga, but then I started to consider the possibility of adding a Syquest Zip drive instead.

I'm dying to use CD-ROMs such as my CDs with my Amiga without having to borrow other people's CD-ROM drives, and

No more fuzzy samples



The most common audio related query we get is about poor sampling results. For one reason or another, people are forever being frustrated by samples that are poorly recorded: muffled, noisy, noisy, muffled, too quiet or too loud.

Sampling using an 8-bit system is less than laboratory conditions is considered a bit of a misfield to say the least, with threats from electrical interferences, bad sources, poor connections, sample rate mix ups and the like, all conspiring to make up your sounds into one big fuzzy mess.

However, now that CD-ROM drives are cheap and readily available, you can all but remove

your sampler to the scrap heap, instead taking your sounds from CDs in a neat direct digital-to-digital transfer.

There's no need to buy special CD-ROMs with sounds already sampled in WAV or IFF formats. You can simply take any audio CDs, and with the right CD-ROM driver and software, you can catch digital audio straight off of the CDs for you to use in your personal creations.

The Atari Play 'n' Play software comes with a tool called TRKDownload. TRKDownload won't work with all CD-ROM drives, but it's freely available from our carrier CDs. Amnet and public domain suppliers, so it won't cost you anything to check if your drive is compatible.

If I decide to go for the CD-ROM drive first I'd like to know if there is really that much difference between a 4x and an 8x drive. I want to get it as soon and as cheap as possible.

If I had an external Zip/floppy could I use it on my PC as well? Would the large storage capacity enable me to download lots of software from the Amnet on my PC, and then plug the drive into my Amiga and copy the software onto my hard drive or use it directly from the cartridge?

A friend told me of a device that reads both CD and data cartridges. I found out that it was called Multidisk and cost a whopping £500. This was a little while ago - is it still available and has it come down in price yet?

John Anthony Phillips, Shells

In practical terms, an 8x CD-ROM is twice as fast as a 4x. In day to day use, that's not particularly significant. However you will probably find it hard

to buy a 4x drive these days. It once have dropped in price quite dramatically - we've seen them under £40 - and 4x is almost too cheap to call.

You can run Zip and Syquest units with PCs or Amigas. You'll have to format the disks in PC format and mount them on your Amiga using CrossDOS and an appropriate mounter. Amnet is full of PC mounters and general help in mounting Zip disks for cross platform use. Syquest may be more work looking down, but should also produce few problems.

With a CrossDOS mounter you can happily use the same disk in your Amiga and your PC - which is excellent, as you suggest, for Amnet downloads.

As for which to get, then offer very different things. Downloading the contents of an Amnet CD would take a




4 Zip drives are great, but so are CD-ROMs. Which should get your cash? See Zip vs CD-ROM.

good day or two on a decent modem, and there's no way any mag is going to cover mount Zip disks. If you want an excellent storage/back up solution, we would advise Zip and if you want huge quantities of brilliant software cheap, go for CD. Cheap around and you may be surprised how cheap they can work out - you might be able to afford both.

As for the Multidata? A vague shadow of a memory - not a path worth exploring.

Basic error

 Once upon a time I had an AM50 and I wrote myself a simple program in Amiga BASIC which I use to simulate cash-flow through a bank account. It now has an all singing all dancing A1200 but the program will not run. I have tried it from floppy disk, using the Workbench installed on the hard drive, but the machine keeps telling me either that it is 'unable to open your local Amiga Basic' and/or 'Out of heap space'. I would like to continue using this program through the hard drive but without the hassle of having to load Workbench 1.3 from floppy, or installing it on the hard drive. Is there an easy fix, like installing BASIC on the hard drive, or will I have to rewrite the program in another language, and if so, which one shall I use?

PJ Bryant, Essex

If you are clicking on the program icon, it will try to load Amiga BASIC on and then run the program within that. When you saved over program originally, the icon would store the path that it originally found your BASIC on. If you copy BASIC to your hard drive, for the sake of example to a drawer called BASIC on a hard drive called WORK, then you'd have to click

on the icon, select icons from the menu options and change the path to the default basic option from something like AmigaBASIC to WorkBASIC.

However, that really old Amiga BASIC sometimes falls down on an A1200. Resampling it into AM500 or preferably Blitz BASIC should be very easy, as Amiga BASIC did not have much in the way of non standard commands. Blitz Basic is currently on re-release from Gribbball, and most workbooks should either have it or be able to get it for you. I suggest you get your hands on *BlitzBasic 1.3.1a* and *problemSolutions* from *amiga-hackers*. These are two invaluable tools for getting old Amiga BASIC programs to work on modern Amigas. If you do not have a modem, ask your local PD library to get them for you or check in the Magazine drawer on this month's CD.

Bars & Pipes & Pascal

 I have had my Amiga 1200 for three years, so I am not a beginner to the Amiga scene but, I have been out of it for a long while (about 12 months). I would appreciate it if your talented staff could answer my questions.

1. In September I will be starting college and will be doing a computing course which involves programming in Pascal. Would it be possible to use a double density disk and format it using the PC-DOS driver so I could swap files between the PC at college and my A1200 at home, and also to continue the programming at home? What software would you recommend? I have seen HighSpeed Pascal advertised in *HiSoft's* advertisement. Is this any good? What kind of language is Pascal, and what sort of things is it able to do?

2. My dad is a solo artist (singer), and has recently purchased a Roland MIDI file player and has started to purchase standard MIDI file tracks. I have Music X version 1.1 and have converted his tracks into Music X files using the Music X-to-MIDI program. However when I try to play these tracks on Music X the clock counts but no sound can be heard. Do I need

A1200 Keyboards



The increasing popularity of newer systems has left a lot of people looking for ways of connecting external keyboards to their A1200s. The simple way is to get an interface, such as the ones from Alps, Microsoft or Spectrol, which will allow you to use PC keyboards. PC keyboards are amazingly cheap and very easy to get hold of. Quality is variable but choice is vast. However there are a fair few people who have an A2000 keyboard and want to use that, or just don't like the idea of using a PC keyboard because of their associations with Bill Gates, Big Blue and the Man in Black from *Italy*.

A2000 keyboards have 5 pins on their DIN plugs but one is not connected. The other 4 are +5v and ground, both of these can be fed from the floppy drive connector, and the other two are clock and data lines. These can be connected to legs on a couple of the chips on the motherboard and keep presto, your keyboard is wired up. There are a couple of legs on one of the chips which may cause interference, some people have found it necessary to desolder these legs and lift them off the board, others have found it OK to

leave them in place.

The safest way to do this - if you are not too keen on soldering - is to get a 5 pin DIN socket, a 54 pin PLCC socket and four wires.

Instead of soldering the wires from the DIN plug to the chips legs, put the PLCC socket upside down on chip 1719 and solder the wire to the appropriate pins on the upturned socket. You can just solder straight to the pins but it is very fiddly work, and you have to be careful not to let the chip get too hot. The upturned sockets make life a lot easier.

To be honest we'd advise a commercial option. It may be more expensive, but PC keyboards are cheaper and it will save money in the long run. It's also much safer and much easier. However, if you insist, then now you know how.



▲ The keyboard power, data, and clock lines can be taken from the chip above and the floppy drive power lines from your case and to the correct pins!



▲ For any way to cut the clock lines to the DIN on down, many people seem to cope without doing this though.



▲ In A2000 keyboard socket, for a standard Logic III socket and connect the pins to the chips and floppy power connector.



▲ Pascal is a programming option... maybe not the most exciting thing in the world, but it's how they teach computing.

a MIDI interface to play them? It is not the patch on the 80' installation. What sampler would you recommend in the 16-bit genre. Below £150? How could you please tell me what is the most recent best version of Bars and Pipes Professional and how could I get hold of a relatively cheap copy of it?

3. Lastly, I have just had an 80MB 2.5 inch IDE hard drive installed in my A1200 but have a lot of problems

with software installing. It never did this on floppy disks. What's wrong?

I hope you continue producing this magazine even though the Amiga is arguably in its worst state. Your magazine is the best by a long way. Thank you.

Steven Houghton, Lancashire

1. Yes, swapping files between PC and Amiga is a doddle. If you want

you can get yourself a hard drive. Microsoft does internal and external jobs, which makes life a lot easier if you transfer a lot of files across platforms. Microsoft (31408 30-4666) distributes them in the UK. The latest Pascal option is HighSpeed Pascal from Oregon Research. Call Hwele (0580 323 666) to order a copy. This claims to be totally Turbo Pascal 5.0 compatible, and OS/2 internet mail list subscriber Thomas Gower of the department of Physics and Astronomy, University of Oklahoma told us that it was fine for almost all his class projects when he did a 4 year Masters in computer science.

Pascal is an old language mostly only popular in academic circles. It has strong logic and strong handling facilities and requires a tight discipline which is why it's a good language to train computer students on. Thomas Gower can offer further advice by E-mail on gower@mail.ou.edu.

2. Yes, you do need a MIDI interface, but that's not all. You also need a MIDI instrument to plug into the MIDI interface. Music X will play Amiga samples in addition to MIDI instruments, but when you convert a MIDI file to a Music X file, it will want to play the various parts on a MIDI instrument. The conventional way to do this is to get a MIDI interface and preferably a General MIDI instrument. This will have all the sounds you need for most music, including drums and percussion.

Alternatively, if you don't mind a bit of soldering, why not go ahead with Project 32, our DIY sound card project from the September issue. That will do the job for far less cash and you won't ever need a MIDI interface. 3. Trying to say without more information, Power supply problems are our favourite answer. Overheated power supplies cause lots of crashes.

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3. Trying to say without more information, Power supply problems are our favourite answer. Overheated power supplies cause lots of crashes.

Although your hard drive shouldn't cause stress, if you have an accelerator too, or if your PSU is a bit odd, this is a very likely fault. Unplug any extra peripherals and see if the problem goes away. If it does, you'll need a new PSU.

Wiseass people will tell more powerful PSUs, but PC tower cases come with big hefty PSUs and can be converted quite easily to power an Amiga. See our May issue's 'Off Tower' article for details and ring someone like ICS (01474 519560) for parts.

A to Z



Kissing goodbye to FAQ, we introduce the first part of a new A-Z guide to Amiga jargon, brought to you by John Kennedy.

A is for...

A6000

The first affordable Amiga, it followed on from the A6000 and was launched in 1990. Came with integral keyboard, a 68000 processor, 512K RAM and 512K ROM. There was a trapdoor expansion for adding extra memory, and a slot on the side for hard drives, more memory, video capture cards etc.

A600

Launched as an improvement to the A600, instead of the title truth or of the A1200. Many A600 owners upgraded thinking they were getting a better machine, and instead found their expansion plans very limited. One good thing: it had an integral IDE hard drive interface.

A1000

The first Amiga computer, launched in 1984. Separate keyboard, 68000 processor and 256K of RAM. Graphics, sound and multitasking graphical operating system put it way ahead of the competition.

A1200

Most popular Amiga, an all-in-one unit featuring AGA chipset and a 68020 processor. 2Mb of memory as standard, and Workbench 3. Trapdoor makes expansion easy, and internal IDE interface and PCMCIA slot for other goodies.

A1600

Cut down version of the A2000 for UK market only, with two floppy drives instead of a hard drive.

A2000

Similar to A600, but in big box with separate keyboard. Box had zero expansion slots, as well as PC style ISA slots for use with a Singleboard. A 68000 processor and 512K RAM as standard, but memory and hard drive expansion is possible.

A2600

US only version of A2000, with an accelerator card as standard.

A3000

Big box Amiga, launched in 1990, with 68020 as standard. Guld in SCSI interface, faster floor and release of Workbench 2. Excellent machine, only the high price and the continued success of the PC prevented rapid domination.

A4000

First Amiga with AGA chipsets, the

A4000 was available in C40 and C30 versions, big box style, with zero slots and easy memory expansion with on-board 384K sockets. Hard drive and at least 4Mb of memory as standard. Processor on daughterboard. However, this was not the machine originally designed to be the flagship Amiga and suffered from many design flaws.

Accelerator

Any card which speeds up a computer. Although memory alone sometimes does this, typically an accelerator features a faster processor than currently installed in the host computer.

AddressBus

An AmigaDOS command which allocates memory to be used as a cache or buffer to make access to disk drives faster.

AGA

The major overhaul of the Amiga's custom chips lead to the AGA chipset, offering 16 million colours instead of 4096. Built into A1200, A4000 and C302. A much welcomed improvement.

Agos

Custom Amiga chip used in non-AGA Amiga designs to control the display, the filter and DMA. Replaced into fat and faster versions dealing with more memory.

Alert

A warning message, displayed by either the operating system (page memory is low) or a program has crashed) or an application. Importing a warning about being unable to save a file for example.

Amiga

The best home computer. Launched in the 1980s, will going strong today.

AmigaDOS

The Disk Operating System which is used by the Amiga to store and retrieve information.

Amiga keys

The two keys on either side of the space bar. Used as an extra set of Shift or CTR keys to provide extra functions. For example, using the Right Amiga key and M will swap the current screen for the one behind, making it quick and easy to switch between applications.

Amos

A Raytracer, part of the RT family.

used to store animations. An animation consists of a series of separate images, when displayed in order they give the impression of movement. There are variations of AMM files, including AMMS and AMMT. There are advantages and disadvantages to each, and AMMS is the most basic and therefore most widely supported.

Affex

A programming language included as part of the Amiga operating system distribution. Not only is it possible to write programs using Affex, but as a macro it can also be used to enhance the facilities of other Amiga programs. Affex can also be used to combine the features of separate programs.

AGL

A library designed to provide standard file responses for application programs. Makes it easier for the programmer to provide a more reliable way of obtaining filenames (for example) and gives the user a consistent interface.

Amiga

An AmigaDOS command which creates a new logical device equivalent to an existing physical or logical device. For example, if you ASSIGN floppy: cfi, then any mention of floppy: now refers to the floppy disk drive, cfi.

Attribution

Every file has attributes, and these define if the file can be read, deleted or written to. These 'bits' are set or reset using the AmigaDOS command Protect.

Audio

The Amiga has four sound channels, each of which can replay an 8-bit audio sample. The sound output is available at the back of every Amiga model via two phono-style sockets. The sound needs to be amplified before it can be heard, either with battery-powered speakers or a hi-fi. The audio is also combined into the RF signal from the modulator in various Amigas, which allows the sound to be heard through a TV set.

Avail

An AmigaDOS command which returns the amount of memory currently in use, and the amount of memory currently free.



Backchat

Make yourself heard. Send your views and opinions to Backchat, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to backchat@cu-amiga.co.uk

Tongue-twisted

Can you tell me, please, how Peter Tyebatchenko's last name is pronounced? It's difficult to discuss the worthy gentleman when you don't even know how to say it. And it's hardly right to just call him Peter, is it? He's been something of a hero to the Amiga over the past year or two, so he deserves a little respect doesn't he? (Embarrassing as it is to admit, I just can't make headway with all those consonants in the middle. Please help.

Allen O'Burness, Canada

We've written on the following: "Peter Tyebatchenko" and he hasn't objected to it so far.



▲ Amiga boss Peter Tyebatchenko speaks it out - his name, that is.

Tower treat

Hi, it's me again. But now I'm the proud owner of an Amiga 1200 tower. Putting it in a tower was the best present I could ever give my Amiga. It's opened up a whole new world of expansions and add-ons: cheap Zix drives, CD-ROM drives, hard disks... the list just goes on and on.

Well only have I given my Amiga a better place to live. It also has a new keyboard, CD-ROM drive and a 250-watt power supply. It's amazing what you can achieve by replacing a 23-watt supply with one ten times the power isn't it? The best thing is when you get your friends round, put them in a room with your Amiga, and watch them drool all over it.

The only thing it doesn't have is an Amiga badge. Is there any chance you can give me one of those nice stickers which were on your towers? Please, please, please...

Janis Sweeney, W Yorkshire.

Not sure if we've got any of those stickers left... we'll see what we can do.

An elite force

Why can't big name developers play with Amiga? They'll make enough money on other consoles and computers to produce games on Amiga, even if they don't sell. So it's ClickBOM who are left to do it, with their wish list. I hope those games will make it to Amiga.

I try and help my friends and others around the area of Birmingham to consider buying an Amiga, being as they are cheaper than PCs and

you can do lots more than just play games on them.

The Amiga users are an elite group of people. It just makes so much sense to buy an Amiga even if it is second-hand. I see second-hand A1200s for sale with a monitor, print or inkjet, hard drive, CD-ROM drive, accelerator and 100s of games for just £250-£300.

Are the people selling them mad? No, it's just not the hip thing to have Amigas anymore. What I say to people like that is "*****" to you, if you're not smart enough to play with the Amiga then there will be someone else who will buy one. What I say to everyone is buy an Amiga, or keep your Amiga. If you are thinking of selling it, DON'T.

The Amiga is the perfect computer. Consoles can only play games and PCs need upgrading every three months, so buy an Amiga and join the elite.

Darren Morley, Birmingham.

While we totally agree with your sentiments, you must be realistic about game publishers returning to the Amiga as a major format. The argument that they will make money from other platforms, so they will be able to afford losing money on Amiga games is based on pure fantasy.

Companies must make money in order to exist. No company in its right mind would deliberately publish games at a loss. The Amiga sector is not a charity.

We must face the fact that there are far fewer Amiga users now than there were five years ago. The Amiga is no longer the first choice of gaming platform for most people. Pretending everything is as big as it was then will get us nowhere.

That's not to say it's impossible to develop and sell Amiga games while still making a profit. It's just a bit more of a specialist job these days. The big names will only return when two things happen:

1. the Amiga hardware advances far enough to compete with current PCs and consoles, and...
2. its user base grows to give them a large enough market to which to sell their games.

Shelling out

Your feature "Power Gaming" in the August edition of CU Amiga was great! For me it seems like the Amiga market has turned - more and more developers are making more and more games and utilities, and only one problem remains: people don't buy them!

I recently read that the extremely promising looking strategy game Foundation will only need to sell about 4,000 copies for the publisher and the author to both make a healthy profit, which I think shouldn't be too much of a problem for such a stunning looking game even in the Amiga market. However, some games require a team to work on them and a single programmer with a few people helping him/her isn't enough. Refit and CD-quality audio is becoming more and more important, as it is standard on other platforms. The Amiga needs to follow suit, but it's not that cheap to do.

Good actors and musicians cost a lot of money to hire. So does all the equipment needed. Some game authors only have access to a plain AT386, or maybe even an A500 and need more if they are to develop "high end" games that require OAS/PS/MS or even PowerPC in order to run smoothly. So what can we do about this?

Well, we can buy their games! Very few people do so today. OK, I understand that games are expensive, and that they are not always as good as they looked in the ads. So what? First of all, Amiga games are a lot cheaper than on other platforms, but most users of other platforms buy a lot more games than Amigans do. And it is better buying one game each year than none at all, which some people do even though they

play everything that comes out! And about the advertisements... read the letters instead.

You'll need a reliable magazine for this, but it's worth buying at least one every month. Although I do not always agree with CU Amiga's opinions, the reviews are generally well written and if a title is given more than 85%, you can be quite sure it really is a brilliant game. Amiga games no longer sell 100,000 copies, 2000-5000 is more realistic for an average new Amiga game, but maybe we can make those numbers rise at least a bit!

We can make a difference, together. Don't say I cannot do anything about it, because you can. Your local Amiga dealer probably sells 10-20 copies of an average new Amiga game, so you can imagine how much difference only a few sales can make to whether they'll expand their Amiga shelves, or replace all the games there with PlayStation or PowerPC games. Coalesce all of your friends to purchase a few games as well. Please!

There are people working their asses off to get the Amiga back on track because they love using the machine and want it to survive, but they need to survive themselves as well. When they release their master piece that they have worked on for many years they often find out that they only earn a pitiful amount of money - maybe about \$2000-3000 each if they are a team and have a top selling title. And now!

PS: Upgrade as well, if you can afford it, but buying software might be even more important.

Even Sanchez Undelid via E-mail.

Starting in C

Congratulations on the Basic C career CD give-away and tutorial I've just browsed through. C is a lan-

guage I've just starting to get into, and I'm sure the tutorial will be of great benefit to me, since I got a little more knowledge of the more fundamental and machine-independent aspects of C. Hopefully, this will be seen, as a friend of mine is selling a series of clip-email tutorials which cover everything about programming in C, right from the start.

This is, in my eyes, criticism of your tutorial. As it is, you recommended for the beginners a 'good book' on C. Surely a tutorial encompassing the very basic elements of C would have been beneficial before running the current tutorial. Even one that runs alongside would, I feel, be an advantage. After all, I'm sure the number of C-proficient programmers is small in proportion to the complete C reviews reading the magazine, the majority of which would prefer a monthly beginners tutorial in the language rather than having to purchase a book. How about it?

Chris Howarth via E-mail.

The idea of our C tutorials is to get results fast enough to make the whole thing appealing. If we spend the first six months performing seemingly useless maths functions on meaningless numbers, is any one really going to be excited into taking up C programming? That was why we decided to let the books deal with that side of things.

True performance?

As fast the Amiga seems to be finally heading somewhere. With various development projects underway it all looks increasingly promising for the Amiga's future, especially with the advent of PowerPC processors into the Amiga world. Seeing the PowerUP board in operation at the phase 5 and CU Amiga stand at the 'World of Amiga' show (well worth the visit) I was certainly impressed. However, it's not convinced that they will perform how people may think. The way I see it the PowerPC processor and the 68040 processor both share the same data bus, which would mean a significant slow down from the start because bytes would be wasted when switching between the two processors causing a significant performance hit.

This is perhaps the best way possible to integrate two processors of differing types on hardware and an OS that was never designed to achieve such a co-existence, but I just don't see how it can reach anywhere near the performance of a

PowerPC™

setup purely designed with a PowerPC processor in mind. Any PowerPC native application that called an operating system function would need it to fast switch to the 68040 processor then back to the PowerPC processor. The same goes for any interrupts that are received.

Surely we will see quite good performance from a PowerUP board if it isn't working alongside a graphics card? Are PowerUP boards really the performance we expect or are they just hype?

Ian Chapman via E-mail.

For anyone who missed out 'PowerPC is Coming' feature in the August 87 issue, as we explained then, the PowerPC and 68040 CPUs will not be able to work simultaneously. Therefore for total integration with your existing Amiga

system, a PowerUP card will need a PowerPC version of the Amiga's operating system. 68040 code can then be emulated by the PowerPC. At the moment, executing PowerPC code requires the rest of the 68040-based Amiga operations to stand still. With any luck we should see a PowerPC version of the Amiga's operating system by the end of this year.

Stateside regards

Hi. I don't know whether you know it or not, but many American Amiga users read your magazine here. Personally, I haven't missed an issue since 1993 and I am thrilled with the fact that I am able to purchase it at a local bookstore.

I've been wanting to compliment your magazine for some time now, so I've taken the time to write this E-mail now that I've upgraded from the

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old A2080 to my new A6080/640.

CJ Amiga magazine is truly excellent. Your articles and features have been a service to not only the European Amiga users, but to the global Amiga market as well. Even though we have one last American Amiga magazine here, I refuse to spend \$6 on a magazine the size of an informative pamphlet. Now that we are able to purchase the CD version of your magazine there is even more to look forward to.

Please keep up the great work and get rid of the floppy disk version. All Amiga users should have a CD-ROM by now.

Christopher Ayman, Pennsylvania.

Good to hear you like it. We've adjusted our international distribution in favour of CD issues now. However, we still sell a significant amount of disk issues in the UK. While we'd like and strongly encourage readers to get CD equipped, we are providing a service for Amiga users, rather than dictating to them what systems they should have.

Control freak

After all the problems over the last few years, it's nice to see something good happening to the Amiga. With Gateway 2000 buying them and phase II bringing out the PowerPC cards things are looking up. However after reading about the possible new types of games (Wipeout, Tekken etc) I feel one point has been overlooked: the games port. How could you even begin to control Wipeout with a two button joystick? Even with help from the keyboard it would be pretty much impossible.

I think it's about time we looked for a new standard, and ditched the old two button thing, after all it's

► **Remade it controller - a fitting way to end.**

been with us since the T2's, Orkut 2800. What I would like is something along the Nintendo 64 lines, with analog and digital controls.

Andy via E-mail.

Pukka presentation

I am just writing to you, on behalf of myself and my friend Steve Murray, to tell you about a presentation that we made as part of our University course work.

Steve and I have been Amiga fans for ages (Steve got his A500 almost as soon as they were available) and we now both own A1200s with various extensions. Because of our liking for the Amiga, Steve suggested that, rather than use Microsoft PowerPoint to produce brief and white slides to photocopy onto slides, that we used the Amiga. In the same set of presentations was a PDS running PowerPoint and using the same LCD projector. Can you guess which group had the better results?

While the PC systems were in a higher resolution - partly because it used the VGA connector to the projector, whilst the Amiga was connected to the Composite connector - even great animations on the PC (about 40mm by 40mm on a 14" screen) were jerky on the PC, while via Amiga we were scrolling text and graphics around the screen and using smooth fades/wipes between each slide. Our presentation was aided by graphics produced in Easysoft 2 (from one of your cookbooks) which were cut and pasted into disks, via Dspart.

The only downside to the presentation was, when it was all over, people came to us in awe and asked us how we got "Powerpoint" to do that "It was given us a tip to point to the A2080 on the desk. This story is proof that the Amiga is still superior in some fields. The Amiga does not lie again - probably because it never did in the first place.

Andrew Clarke and Steve Murray, Loughborough.

Loyalty lasts

Thank you very much (and times that by infinity for getting TFX and placing it on CD). I am a subscriber to your brilliant mag and I cannot wait for it to be pushed through the letterbox! My subscription is due

for renewal very soon, and by doing things like this, and in general creating a well balanced read and producing what I think is the best of the two CDs, there is no doubt in my mind that I will be subscribing very soon again!

Keep it up. Thanks very again, and thanks for sticking 110% with the Amiga. All credit to you.

Stephen Thwaites via E-mail.

Good mail. Taking out a subscription to CJ Amiga is a sound move. Not only do you get it before it hits the shops, you also get the chance to take up one of our excellent rules offers. At the moment we are offering 12 issues for the price of 9! Check page 100 for full details.

Stuck on CU...

Good grief, your magazine is amazing. I mean how do you make every little detail so perfect? Your CDs are by far the best, your content is the best, your look is the best, your web page actually works... everything, even the glue you stick the CDs on, with it the best. You can play with it for hours sticking it to things, plugging it at your sides, you can even stretch it to varying degrees and ping it with your idea and you have a brilliant musical instrument. Humm!

Mark Bellens via E-mail.

Believe it or not this is actually a real letter. Thanks Mark. We do try our best.

Turbo is topal

I just had to write and thank you for putting TurboPrint II into your CD.

I've had my A6080 over four years and though I was getting the best possible printouts using the Canon Drive, I've finished and upgraded the software over the years but was unhappy at the unacceptable 'banding' on the higher quality printouts. I had TPI more out of curiosity than the hope of improving my printouts. What a misconception! The protocol was so good, I didn't believe it was the same printer. I sent off for the cheap upgrade to the full version the same day!

I am so impressed with the software, it shows that the Amiga is perfectly capable of producing quality printouts.

Paulard Butler via E-mail.

To the Point...

E-mail pen pals

I notice that you get lots of letters from people all over the world. Can you do a one off E-mail penpal page for those interested? Thanks... keep up the good work

Geosma Wakeley, Ringwood.

That's not a bad idea. Did you know we ran an Internet mailing list for CU Amiga readers? You can subscribe to it (for free of course) directly from our web site www.cuamiga.co.uk.

Korny features

Well down to Andrew Kurn for an excellent Power Gaming article. It is just about the first time I have heard someone go forward about the current situation.

M Simpson, Ipswich.

D.J.Why?

I think this new DJF series is a mad idea. I am only 14 years old and don't have much access to soldering irons and hardware. I'm sure there are also plenty of adults out there who don't like fiddling about with resistors and 1k log potentiometers. You should have articles on prepping drills and planes and how to assemble things as simply and uncomplicatedly as possible.

Barnes Purdy, Solihull.

The DJF projects so far have been fairly complex, but the next one will be a lot simpler. There should even be one soldering involved, and you can expect a pleasant surprise when it comes to getting hold of the bits.

Sixth Sense sadness

I was very annoyed at September BT's recent broadcast of Sixth Sense Investigations. I don't own a CD Drive.

Dominic Moore-Murphy (age 15, Edinburgh).

You know the answer to this one, don't you? We made it clear that Sixth Sense Investigations was too big to fit on floppies. Sorry!

CU Amiga Magazine reserves the right to amend or omit letters submitted for publication.





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Points of View

Our Technical Editor writes an open letter to Jeff Schindler, the General Manager of Amiga International.



A short term solution to save the Amiga



by Mark Bellinson

Dear Jeff,

Every Amiga enthusiast has ideas on what Gateway and Amiga International can do to save the Amiga. Here I'm stating the greatest recurring theme of Amiga enthusiasts suggestions.

State of disrepair

The "stock" Amiga hardware and software scene is in a pretty bad state of disrepair. Most Amiga enthusiasts are running an impressive array of third party hardware and software which shores up the gaps. It takes time and experience to create a "kick-ass" Amiga, so how about Amiga International providing us with one as standard?

As it will take a long time to create a new Amiga, the short-term plan, as we know it, is to license third party Amiga developers such as Microware and Index Computers, letting them create officially budgeted Amiga compatible hardware like it should be. There's little chance that a significant OS upgrade, even when it does come, will catch up with current developments.

The third party add-ons in use by Amiga enthusiasts today were written by many individuals, experts in each field, over the

course of years. This shrewdness seems to have kept the Amiga alive.

I propose that to get the Amiga off to a running start, Amiga International take the current state of a "kick-ass" Amiga and snapshot it into officialdom. How this will actually work is that Amiga International will provide official archives that Microware, Index and One Man Amiga Construction Limited can install onto hard drives as standard on all new machines. This software turns the Amiga from a good machine into a bloody fantastic machine, getting practically nothing extra to boot.

We're talking about Workbench 3.1 and a proper conventional scheme, some vital utilities and a TCP/IP Internet setup. It's easy to start ranting on what we each personally think should be bundled as standard but compatibility, commercial reality and the chosen direction of the R&D department will obviously need to be taken into account.

The software, whether it's the full version, and ultimately what over-heads are acceptable needs to be decided by a body officially in charge of creating the snapshot. The whole lot can then be redesigned

"I propose that to get the Amiga off to a running start, Amiga International take the current state of a 'kick-ass' Amiga and snapshot it into officialdom".

as AmigaOS Plus or something.

Next time someone asks what is being called AmigaOS, it will actually look like a modern computer. It won't look like the horrible four colour grey and white system that's the stock Workbench 3.1 - still being shipped with Amigas today.

Radical driver & RTG

More radically, driver and RTG subsystems such as CyberGraphX and AHI could be supplied. It will have a major impact if all future software has to support the enhanced features. Software will have no choice but to take advantage of the hardware which licensed hardware producers must build it.

Controversially I also believe Magic User Interface provided as standard can do nothing but take the Amiga forward, despite ignorant prejudices. There is nothing on any other platform to match the graphical power and ease of use for the

user and programmer as MUI. If it's official, the Amiga will have the best GUI system in the world, full stop.

Imagine that new Amiga owners start here, and don't have to discover what to obtain to get a "kick-ass" Amiga. This is good and recognises those who've maintained the Amiga is a viable acquisition for Gannex 2000. Later on the third party software can be incorporated into the OS proper, aspects such as built-in Internet software, proper integrated graphics and audio, RTG systems and so on. They can even remain API compatible with CyberGraphX and AHI. All due respect to A's R&D, but they started yesterday while the authors of those subsystems worked years on their implementation. It's now time to recognise their efforts.

Tangible results

I believe Amiga International need to hire a panel of Amiga enthusiasts (who will provide a contact point for ICQA and other Amiga enthusiasts think tank groups) and assign a budget to the project. With this, the die is then cast to produce real tangible Amiga enhancing results for the masses in a short time frame. I doubt there'll be a lack of applications for the post to head up such a group, as many CU Amiga readers would jump at the chance.

Thanks for your valuable time Jeff. I sincerely hope you give due thought to this idea from the collective of Amiga enthusiasts.

Mark Bellinson - mark@meads.net



▲ Wouldn't it be nice if Workbench was of the far better seen like this.

■ Mark Bellinson is CU Amiga Magazine's Technical Editor.

CU Amiga sales figures... a most encouraging trend



by Tony Morgan

August was a strange month. It always is. The summer arrived, half of the UK's population went off on holiday, and students around the country showed their tails off waiting for their exam results. The magazine publishing business has its own 'exam results' released in August too - the official sales figures for the first half of the year - so we were just as nervous as the announce-

ment date loomed. With many predicting the Amiga's downfall in 1997, sales of Amiga magazines are an interesting barometer of Amiga usage. Now that the UK Amiga magazine field has been narrowed to just two, some of the stats were predicting similarly gloomy results for CU Amiga.

However, despite the closure of two UK Amiga magazines already this year, the new officially certified world wide sales figures for CU Amiga for the period of January to June 1997 are most encouraging.

Our new average monthly sale is 27,391 copies. That's less than a 3% reduction on the sales from the second half of 1996. Even more encouraging for us, is that the figures also show that CU Amiga is now bought by more people in the UK than any other Amiga magazine. You can take a look at the official ABC (Audit Bureau of Circulations) web site for a full breakdown of sales, if you're that way inclined (www.abc.co.uk).

Six months ago, when our previous ABC figure of 26,761 was

"Our new average monthly sale is 27,391 copies. That's less than a 3% reduction on the sales from the second half of 1996".

announced, I told my publishers (who are very nice people, I should add) that I was confident of maintaining those sales over the following period. As expected, the response was a friendly, slightly condescending pat on the head, based on the totally logical assumption that the next figures would take a substantial drop, just like all Amiga mag circulations have done for at least five years. I knew the Amiga scene would be smaller and as a result, there would be fewer people to sell the magazine to, but despite this I still had a funny feeling...

New despite that 3% drop, I like to think I've kept my pledge, and that makes me a happy chappy. I think don't think this is due to the widely believed theory of 'missing out' readers from magazines which have closed. Rather it's a result of six months of incredible effort from

a small but an extremely enthusiastic team.

I'd like to thank everyone who has helped turn CU Amiga into such a positive and progressive magazine. Moreover, and here comes the sloppy bit, I'd like to thank you all for buying it. Writing with wallets is the kind of self expression my publishers like.

You can be sure the next six months will see even more improvements in CU Amiga. We'll continue to bring you the best for you Amiga every month, and we'll also be unveiling a string of exciting new features, projects, cover disks and peripherals.

Once again, thanks for supporting us through these tricky times. It's appreciated.

■ Tony Morgan is CU Amiga Magazine's Editor

The £400 Amiga is possibly a rather bad idea



by Andrew Kerr

There is a lot of speculation and concern flying about as to what the future holds for the Amiga platform. One thing that worries people is the price. The Amiga is regarded as a cheap machine, and a lot of people think that if those wonderful ideas for hardware will make it an expensive machine, not in the spirit of the old Amiga.

The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards,

Calpurnia chips and so on, it isn't likely to remain as a £400 machine. Will a £1000+ Amiga still be an Amiga? With the prices of PC components tumbling, can the Amiga remain competitively cheap?

Actually, when the Amiga first came out people realised that it was too expensive. At 30% more costly than its main rival the Atari ST it sold out some time less because people recognised it was worth paying more for the better hardware. It seems cheaper today, but we seem to forget inflation. If a new Amiga was launched today at £7-800 it would be comparable. A £400 machine would be possible, but the limitations of making a computer fit a tight price bracket is what put us in this situation in the first place.

If the AT300 had been launched at a slightly higher price it could have been a lower system ten times

as expandable as it is now. When makes an Amiga appear cheap is what results can be achieved on a minimum specification machine. If future machines allow a good range of specification, there should be no problem.

Taking a look at the £600 price point, it rapidly becomes clear that it is just too limiting. No new computer should come without a hard drive, for instance. An £500 really is as low as we can go for a base CPU, though even that is like a false economy when PowerPC chips cost more for vastly more speed.

It'll have to be a tower case so that we aren't all stuck with the same old GY if it is pay through the nose problems that plugging in such long standard devices as CD-ROM drives causes us today. Plug in keyboards can then be industry standard, which is pretty convenient. Memory? Let's say 8Mb memory

costs are so low that less is better. It will take an irrelevant amount of money. Let's not let it all up then. Case, keyboard, hard drive, floppy drive, cables, 8Mb memory, SCSI, CD-ROM... we're rapidly approaching the £600 limit already and we haven't got a motherboard and all those custom chips yet.

PCs are based on a motherboard which allows access to be plugged in as desired, the reason why pricing covers such wide ranges. The Connect motherboard announced by Intel should allow OEM manufacturers to offer Amigas, varying from an 1984's £4000 big box Amiga with a 300 hard drive for around £750. So go to a grand and a half and you're looking at an 1984/85, 34Mb, CD-ROM, 400 hard drive, graphics card, modem and a 17" monitor. That fraction of a tonne, rather than whodunnit at traditional price points is what the Amiga really should be aiming for.

■ Andrew Kerr is CU Amiga Magazine's Staff Writer.

"The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards, Calpurnia chips and so on, it isn't likely to remain as a £400 machine".

Just looking at Myst is an adventure

(Imagine what playing it must be like)

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